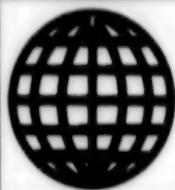


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8 December 1993



**FOREIGN
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JPRS Report

Central Eurasia

Military Affairs

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Military Affairs

JPRS-UMA-93-044

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ARMED FORCES

SCUD Launch Exercise In Far East MD

94UM0080A Moscow KRASNAYA ZVEZDA
in Russian 9 Nov 93 p 2

[Article by Valeriy Usoltsev: "Storm No Obstacle to SCUD: Missile Launches Outside of Missile Test Site"]

[Text] For the subordinates of Guards Lieutenant Colonel Vladimir Chelyshev, it was a seemingly routine field excursion. A rapid trip to the designated area and deployment at the launch site. Just as they had done many times. But after the launch command was given, the missiles hadn't taken off from the launchers for a long time: the launches were training missions—for times and capabilities have changed. But this time, an actual missile launch was in store for the men.

Judging from the way those present at the launch site kept glancing at their watches, it was clear that zero hour was not far off. The missile crews' work became more intensive. Wind gusts increased in intensity as well; the wind seem to penetrate to the bone. Would it affect the accuracy of the launch?

It has been very very difficult for the missile crews to improve their professional skills. Manning levels—they are staffed at just over 50 percent—leave much to be desired, even though a 50-percent manning level would be the envy of commanders of tank, motorized infantry, and other units in the Far East Military District. However, in this instance we are talking about manpower for the Ground Forces' strike force—the missile units. Unfortunately, volunteer soldiers haven't solved the problems either. There are just 14 of them in the battalion. Most of them are married men who need housing. Or, to start off, even a family dormitory with the prospect of obtaining a normal apartment in the near future. After all, two groups of mandatory-service conscripts are being discharged to the reserves simultaneously this fall. And even the most efficient work on the part of volunteer soldiers, officers, and warrant officers won't be able to fill in this gap in the establishment and, most importantly, in the missile crews.

I frankly admit that I expected some huge roar. However, the hum of the SCUD (this is how the missile is known abroad) was no louder than an airliner taking off. But on the whole, the missile launch was a captivating and majestic sight; and a little disturbing, since you know what kind of warhead the missile can carry.

A second SCUD was launched after a short span of time, followed by several minutes that, for some of those present, seemed like an eternity. Each telephone call to

the launch site was treated with special concern: Everyone was waiting for word from the target site.

Few people in Lieutenant-Colonel Vladimir Chelyshev's battalion can brag of having taken part in a missile launch. The situation with actual launches of operational-tactical missiles in other missile battalions of the Far East Military District is the same. However, the missile crews and their commanders are not to blame for this: Such launches are very costly. Especially if you consider that they are made, as a rule, at state test sites located thousands of kilometers from where the units are stationed, and that it costs millions of rubles just to send the personnel and equipment to them.

Last year the Far East Military District had no money at all for trips to the state test site. Did that mean, then, an end to missile launches? Yes it did, and there were no guarantees that the situation would not repeat itself in 1993.

Of course, one could understand a wait-and-see position: There's a limit to what you can do. However, the Far East Military District's Missile Forces and Artillery Administration decided that every problem has a solution. And they took a difficult decision: To conduct launches at their own test range.

Of course, the smallest detail had to be taken into account and all the pros and cons weighed. No matter how it was done, any launch would be carried out in the vicinity of populated areas. Finally, the consent of local authorities and civil and military aviation officials would have to be obtained.

The job of making the calculations, carrying out on-site surveys, and selecting the course and trajectory of the missile was supervised by Major-General Leonid Shivyakov, chief of the district's Missile Forces and Artillery Administration. Officers of other administrations and services were enlisted in the effort. And only when the missile forces commanders were convinced that actual SCUD launches on the district's territory were possible and that their safety could be guaranteed did Maj. Gen. Shivyakov go to the district troop commander with a specific proposal. After a thorough study of the plan and calculations, the latter approved the initiative.

Finally, the long-awaited call came: Both missiles had hit their targets. The missile launched by the crew led by specialist first-class Yuriy Baskov did the "bull's eye," as they say. Col. Gen. Viktor Chechevatov, commander of Far East Military District forces, who was present at the launches, gave high marks to the missile crews and presented valuable gifts to the ones that most distinguished themselves. The guardsmen were also given prizes by Khabarovsk Kray Chief Administrator Viktor Ishayev and Jewish Autonomous Province Chief Administrator Nikolay Volkov.

Commentary by Maj. Gen. Leonid Shvidyakov, chief of the Far East Military District Missile Forces and Artillery Administration:

"Yes, the missile crews' performance was praiseworthy. Especially when you consider that before deploying at the launch site they had traveled many kilometers, hadn't fired a missile for some time before that, and the weather, as you yourself saw, was not cooperative. But successful launches, unfortunately, do not solve all the problems facing our missile battalions. The most important thing is people, to have a full complement of specialists.

"We intend to continue using the experience in missile launches gained in the district. We have become convinced that these launches are no less effective than those at state test sites and more economical. In short, we are going to improve our proficiency, no matter how hard life gets. The public must be assured of the missile crews' fighting ability."

Speculation on Grachev's Job Security

94UM0095A Moscow NOVAYA YEZHEDNEVNAYA
GAZETA in Russian 12 Nov 93 p 2

[Article by the military expert with the investigative service of NOVAYA YEZHEDNEVNAYA GAZETA under the rubric "Forecast": "Will Pavel Grachev Remain Minister of Defense?"]

[Text] Rumors of the impending retirement of Army General Pavel Grachev, defense minister, still persist. References are made to "reliable sources" in presidential circles, in the government, in the Ministry of Defense and the General Staff of Russia's Armed Forces. The matter came to the attention of the president of the Russian Federation himself, who last week refuted all conjectures about the military minister's departure, stating, among other things, that Grachev is working and will continue to work.

Many military experts and analysts believe, however, that "where there is smoke, there is fire." It was no accident that Yeltsin himself came to the defense of the key minister of forces (just recently he was assigning this matter to his press secretary Kostikov).

By officially expressing his firm confidence that Grachev would remain at his post, Yeltsin unquestionably reassured Pavel Sergeyevich. He did this, one general said, to "prop up his cherished minister of forces." There have been reports that following a massive attack on Grachev by a number of newspapers, the minister was for some time in a slight panic and even requested that the entire press on this matter be investigated.

When Yeltsin swept aside the "unnecessary conjectures," however, Pavel Sergeyevich was so happy that he

met the very next day with reporters in the Ministry of Defense and related with enjoyment the speech of his esteemed superior.

Despite everything, however, can we consider Yeltsin's pronouncement that Grachev "has been working, is working and will continue to work" the final word? There are plenty of grounds for doubt.

In the first place, one has to acknowledge that the president's most vociferous assurances frequently mean practically nothing. (Remember how he announced that prices would not rise, that the "Black Sea Fleet has been, is and will continue to be Russian," that he would not give up Gaydar, that a military doctrine would be approved on 15 October without fail, and so forth.) In the second place, there is a fairly large group of people among Yeltsin's associates, particularly in the government, who now feel that Grachev vacillated in putting down the October uprising, that he made a special effort to drag out the time, retrenched, spent time sizing up the situation.... In one interview, for example, Gaydar frankly stated that the ministers of the forces "did not do enough" and should be replaced. Even Dmitriy Volkogonov, the president's military adviser, was forced to acknowledge openly that the Army had dallied during the first stage of the events.

All of this can lead us to only one probable conclusion—that there are fairly substantial forces on the president's team and in the government who are not loyal to Grachev.

The political battle surrounding the minister of defense is only beginning. By putting down the October uprising, Grachev not only demonstrated his loyalty to the president but also increased his influence upon the latter. Many of those close to both Yeltsin and Chernomyrdin do not like this. Just as they do not like the fact that, like it or not, Grachev is becoming an increasingly independent political figure. Gaydar, Kozyrev and Pamfilov have already expressed their "doubts" about the defense minister's competence. And they, members of the Russia's Choice bloc, will play the key role in the formation of a new cabinet of ministers.

Those political forces who expect to win the elections, in turn, want to be able to rely upon a minister of defense who will not vacillate at a critical time but who will also play a subordinate and not an independent role on the new government team.

Is this not why calls are being heard with increasing frequency following the "lessons of the October uprising" for a major increase in the society's civilian control over the military? And the first sign of such an increase is the fact that military councils of military districts, fleets, armies and branches of service will now include representatives of civilian agencies of power. There is a reason why Andrey Kokoshin, the only "civilian" deputy defense minister, has recently been emboldened.

There is no question that the president will continue to defend Grachev, who saved his political career. However, in addition to this purely good-business [merkantilnyy] factor are far more serious considerations. With the creation of the State Duma and the Federal Assembly, Russian state government is acquiring a totally new internal political arrangement. And Grachev's future fate will depend not upon Yeltsin's favor or disfavor but upon what political forces dictate the president's strategy and tactics of action.

Marine Commander Interviewed on Battle Readiness, Reform

WS2211104693 Kaliningrad STRAZH BALTIKI in Russian 16 Nov 93 p 1

[Interview with Colonel Y. Kocheshkov, commander of a guards brigade of the Baltic Fleet Marines, by M. Pisarev; place and date not given: "Will Mobile Forces Have Black Jackets?" (reference to colors worn by Russian Marines)—first paragraph is STRAZH BALTIKI introduction]

[Excerpts] A new type of regular force—the Marines—emerged in Russia 288 years ago. On the eve of this anniversary, one of our correspondents met with Guards Colonel Y. Kocheshkov, commander of a guards brigade of the Baltic Fleet Marines.

[Pisarev] Yevgeniy Nikolayevich, to put it figuratively, you are celebrating your holiday in the trenches—a check of your forces is under way. Have there been any results yet?

[Kocheshkov] We conducted a two-day test shooting of firearms, artillery, mine launchers, and antitank guided missiles. Later, we had a company tactical training exercise utilizing new methods which included the overcoming of a fire zone and 16 lines of obstacles. Colonel A. Todoshchuk, deputy commander of the Coastal Forces in the Russian Fleet, assessed our actions positively. His general mark is "good."

[Pisarev] The Fleet is undergoing active reform. Does it embrace the Marines?

[Kocheshkov] Certainly. For example, this is the first check conducted according to a new organizational and staff structure. Its essence is that we have formed two additional battalions with the same number of personnel. Furthermore, we have completely dismantled the tank battalion. The unit now includes two light and two heavy Marine battalions, and two landing and assault battalions. This enhances the capacity of our brigade considerably. It will be able to land two groups on the coast instead of just one, as in the past. The upgrade of the unit's mobility has also increased its combat ability.

[Pisarev] The Marines are said to engage in anything but battle readiness. Is this true?

[Kocheshkov] I would not say so. We really engaged largely in the construction of housing for the Fleet and rendering assistance in its withdrawal from the Baltic states. However, recently we have engaged in battle training exclusively. We hope that this will also be the case in the future, although we must resolve other problems as well.

First of all, this is a problem of accommodation. More than 100 families of our officers and warrant officers have no apartments. [passage omitted]

[Pisarev] A large reduction of all types of arms in the Russian Armed Forces is being conducted today. How do you envision the future of the Marines?

[Kocheshkov] It is said that our brigade will be cut by half in the near future. What sort of a unit will it be then?! On the other hand, however, much is being said about the formation of mobile forces in the Fleet. These forces will have to include Marines.

I believe that we cannot be reduced any more, certainly if the state needs us as professionals. Recently, I have been to the United States and familiarized myself with the structure of its Marines. Of course, we must not copy it blindly. However, the U.S. attitude toward its Marines is very respectful. The Marines are considered to be the elite of their Armed Forces. True professionals serve there. to say nothing about their number.

[Pisarev] Do you think U.S. Marines are superior to the troops under your command?

[Kocheshkov] Certainly, our technical equipment is worse, and some of our facilities are inferior to their U.S. equivalents. I think, however, that we do not yield to them in the key indicators.

I am convinced that our best units, such as the landing and assault battalion commanded by Guards Lieutenant Colonel Aleksandr Darkovich, the battalion under the command of Major Yevgeniy Burdinskiy, and the artillery division commanded by Guards Lt. Col. Yevgeniy Romanenko can even outdo their U.S. counterparts in training.

Many of our veterans, who have served 30 years or more, are worth two or three U.S. Marines. For example these are senior guard Warrant Officers Nikolay Antiysin, Ivan Krivenko, Aleksandr Yatselenko, and Ivan Kazakov. They have participated in many war actions, including those in Angola, Egypt, and Syria....

We have received a document authorizing these veterans' transfer to the reserve. [passage omitted]

Prospects for 'Nonlethal' Weapons Development

94WC00144 Moscow NEZAVISIMAYA GAZETA in
Russian 13 Nov 93 p 6

[Article by Sergey Grigoryev: "Nonlethal Weapons—Is a Humanization of Coercion Possible?"]

[Text]

Paradox

Man has been improving the means of armed combat since he first appeared on the planet. But the 20th century brought substantial corrections to the rule that once appeared immutable: The better a weapon is, the more enemies can be destroyed with it. As paradoxical as it may seem, the destructive power of contemporary weapons often turns out to be too great to resolve many problems facing the armed forces. The clearest example of this paradox is that of nuclear weapons: Having limitless power, they proved to be the least applicable.

In Search of a Way Out of the Impasse

Unfortunately, the necessity of utilizing nuclear power to resolve political tasks is a reality of the present and foreseeable future. Having run into the problem of an insurmountable barrier on the way to the use of weapons, politicians and military people began to look for ways around this barrier. In the scope of this search, a new generation of nuclear weapons is being created, in which the energy of a nuclear reaction is released in a predetermined form and direction. The accuracy and selectivity of conventional weapons is being increased substantially and the number of weapons expended to destroy a single target is being reduced. Despite this, traditional kinds of arms cannot be used in a number of cases for political, moral, or ecological reasons or because of the fear of the escalation of the conflict and the adversary's use of weapons of mass destruction. This happens especially frequently in conflicts of low intensity, in carrying out peacemaking missions, and in actions against insurrections and terrorism. In the search for a way out of the "dead zone" in which traditional means of armed combat were unusable, military people turned to a weapon that is designated "nonlethal" or "weapon of nonlethal action."

Radioelectronic Counteraction

The general designation "nonlethal weapons" is understood to mean weapons operating under various principles that are capable of disabling the enemy or depriving him of a combat capability without irrevocably destroying personnel or physical assets and without inflicting serious environmental damage. Some types of these weapons appeared quite some time ago. The first large-scale operations with radioelectronic counteraction date back to the time of World War II. Today, radioelectronic warfare is changing from a means of support to an independent form of waging combat actions. The technologies developed in the scope of radioelectronic warfare are giving rise to new means of defeating an enemy. Research is being carried out on the effects of powerful microwave radiation on the

human being (superhigh-frequency weapons). Quite promising, from the point of view of specialists, is the use of generators of an electromagnetic pulse to disable electronic and, in the future (with the increase in the power of the radiation), electrotechnical equipment. If a special nuclear device exploded at high altitude is utilized as the source of the electromagnetic pulse, it will be possible to disable antenna systems and receiving tracts of radio equipment in areas the size of countries.

Lasers

Lasers, the use of which to destroy hardware has not yet passed the experimental stage, have found a battlefield application in disabling organs of sight. The basic specifications (dimensions, weight, and range) of combat laser systems are comparable with analogous characteristics of hand-held firearms and the inflicted damage may or may not be reversible depending on the conditions of illumination and protection of the eyes. In the United States, the application of blinding laser devices is presently being curbed not by technical problems but by debates in Congress about the humaneness of such weapons. Powerful sources of conventional light may be used as sources for the temporary disabling of enemy soldiers. The selection of the radiation characteristics makes it possible not only to affect the organs of sight but also to cause reversible changes in the psychoemotional state of the individual. There have been reports that the Russian internal forces have illuminating grenades that cause the temporary (for several dozen seconds) blindness of violators.

Subaudio Weapons

The possibility of engaging personnel, including those in shelters, with the help of subaudio weapons is being studied. It is known that low-frequency acoustic oscillations are capable of affecting the internal organs of man. Under certain parameters, subaudio weapons are capable of producing a state in people similar to that of an epileptic seizure. Previously the question was investigated mostly by special services. At the present time in the United States, they are studying the possibility of creating subaudio weapons in the scope of the research programs of the Department of Defense.

New Chemical Receptors

New kinds of chemical weapons can be quite effective means of nonlethal action. The development of chemistry makes it possible to create not only toxic substances that temporarily disable people but also chemical receptors affecting technical systems. The targets of such means may be rubber elements of equipment, fuel, and engine lubricants. The development of gene and cell engineering makes it possible to create nonlethal biological weapons. There are known bacteria created for industrial purposes that can break down petroleum products. The application of such means can deprive the enemy of fuel supplies. In the United States, in the course of the destruction of missiles in accordance with the INF Treaty, they made use of microorganisms that break down solid missile fuel. The culture medium for bacteria may be various kinds of

semiconductors used in electronics. An important feature of biological weapons is the fact that they are now being created in the scope of industrial research programs. At the same time, international agreements that prohibit or limit such weapons are a serious obstacle to the development and application of chemical and biological weapons of nonlethal action.

Impact on the Living Environment of Man

In the long term, one cannot preclude the possibility of the creation of fundamentally new kinds of arms that impact man's living environment: The climate, the air around the earth, the hydrosphere, and the lithosphere. For the first time, the Americans carried out such operations for military purposes during the Vietnam War. Overall, the effectiveness of their purposeful influence on natural phenomena is still not great. But the study of the states of unstable equilibrium in geophysical processes may lead to the revelation of such possibilities. Let us note that in the case at hand essentially civilian research may lead to the development of weapons. The attractiveness of geographic weapons is also dictated by the fact that the energy reserves of natural phenomena greatly exceed the power of all destructive weapons created by man.

Virus Programs

Contemporary means of armed combat are technologically saturated. The forces are practically lacking a combat capability without computerized systems for the transmission and processing of data. The information support and software for automatic and automated systems may be quite vulnerable to program viruses, program stowing, or false information introduced into the system. It has been reported that such means of affecting the enemy have already been used in military actions in the Persian Gulf. The growing dependence of arms, systems, and control processes on computer technology and the snowballing increase in the complexity of software establish the preconditions for a successful attack on the "nerve systems" of contemporary armies.

Psychological Pressure

An essential element in the arsenal of "nonlethal" arms is that of psychological operations, which is understood to mean the use of systems, methods, and forms of information dissemination to influence the behavioral and emotional attitudes of people. Individual techniques of psychological pressure on the enemy have been practiced since time immemorial. But only today do the increased information dependence of humanity and its armed part as well as the greatly increased number of channels for the dissemination of propaganda make psychological operations a military weapon. Surveys of Iraqi prisoners in 1991 showed that leaflets and radio broadcasts had an influence on the combat morale of the troops that was comparable with that of bombing and strafing. To a considerable extent, this was the result of the proliferation in the 1980's of forces and systems for

psychological operations in the tactical and operational echelons of the U.S. Armed Forces.

No Place for Army Weapons on the Street

Overall, all of these means of armed combat—from the most complex electronics to the incredibly slippery compound made from banana peels that blocks the movement of people and vehicles on roads—substantially expand the number of variants within which today's commanders may operate. At the end of the 20th century, the possibility of regulating the degree of influence on the enemy and adequate reaction to all of his influences is decisive for victory in local conflicts and the establishment of the preconditions so that one may prevail in a major war.

The article could be concluded with a reference to the materials in the journals ZARUBEZHNOYE VOYENNOYE OBOZRENIYE [Foreign Military Review] and VOYENNAYA MYSL [Military Thought] (for those wishing to study the matter in more detail). But the events in Moscow at the beginning of October raise the question of "nonlethal" kinds of weapons in operations in support of order. As a matter of fact, historically many of these kinds of weapons were created precisely for police actions. They include carbines for firing rubber bullets, special stunning and blinding grenades, chemical weapons, and many others. It is tragic that it was tanks, infantry fighting vehicles, and assault rifles intended for quite different tasks that were in action on the streets of Moscow. It seems that army weapons should not be used in the streets of cities. Or, in the country of the creative weapons builders Fedorov and Kalashnikov, is it not possible to equip the forces of law and order with a more suitable weapon than the AKS-74U? Effective fire in street confrontations from this powerful and long-range assault weapon that is safe for the surrounding people is possible only for a very few specialists from elite subunits. Policemen and young soldiers of the internal forces can better handle their own tasks if the weapons in their hands have a shorter effective range and a greater stopping power of the projectile. Otherwise there will be several accidental victims for every neutralized bandit (which, by the way, has happened). It is not without reason that police forces abroad are often armed with large-caliber smooth-bore weapons or assault rifles using pistol cartridges.

It is quite probable that if the subunits guarding the White House had been armed with special police arms rather than army weapons it would not have been necessary to put down the resistance by firing from 125-mm guns and there would not have been another several dozen barrels scattered around the country that are ideal for terrorists. It would have been even better if the extremists had been stopped on the Garden Ring by the skillful actions of the internal forces with the help of water cannons, rubber bullets, tear gas, and other means at their disposal. And then, one can just dream that

conflicts will be resolved by politicians in offices and meeting halls without even the use of "nonlethal" weapons.

Correction to Article on 'Nonlethal Weapons'

94P50047A Moscow NEZAVISIMAYA GAZETA
in Russian 25 Nov 93 p 6

[Sergey Grigoriyev item: "More Precisely"]

[Text] In the material "Nonlethal Weapons" (NEZAVISIMAYA GAZETA 13 Sep 93 [evident misprint for 13 Nov 93]), which I submitted to the editors, the word "formula" [retseptura] was replaced by the word "receptor" [retseptor]. In the case at hand, the term "chemical formula" [khimicheskaya retseptura] indicated a chemical means or a set of such means used to put equipment out of commission. The use of the term "receptor" [retseptor], which relates to biology, essentially distorts the meaning of a part of the article. Unfortunately, during the editing process the distorted term was inserted into the subheading of a section, which made the mistake even worse.

POLICY

Border Guards Chief on Military Aspects of 'Security Concept'

94UM0075A Moscow MEZHODUNARODNAYA ZHIZN
in Russian No 9, Sep 93 (signed to press 1 Sep 93)
pp 16-20

[Article by Colonel-General Andrey Nikolayev, Commander-in-Chief of the Russian Federation Border Troops: "The Military Aspects of Ensuring the Security of the Russian Federation"]

[Text] By edict of the Russian Federation President, in August 1993 Colonel-General Andrey Ivanovich Nikolayev was appointed Commander-in-Chief of the Russian Federation Border Troops and a Deputy Minister of Security of Russia; from December 1992 to August 1993 he was a First Deputy of the Chief of General Staff of the Russian Armed Forces.

In analyzing the military aspects of Russia's security, we came to the conclusion that looking for solutions to the general task of creating a system of state security we need to more precisely define the place and role of the military factor in it. If we do not do it today, if we do not develop approaches to this problem, we will inevitably have to deal with it in the future. This is first.

Second, working on issues of ensuring national security, we have to have a clear and precise notion of the economic, political, scientific-technical, and, of course, military-strategic interests of Russia.

The lack of a clear concept of the national interest on the scale of the state hampers the General Staff's work on strategic planning of Armed Forces deployment,

designing future programs of arms development, and other long-term plans. The point is that the solutions to particular tasks—and military security is only one of them—may be found only after the general task is accomplished: The development of the concept of Russia's security. I see the concept of Russia's security as a long-term view of the state policy in the spheres of international relations, economics, science, culture, military science, and others. Among other things, this concept should define the role and place of military force in the system of national security; define, by analyzing the source of military danger, potential military threats, their aim, and ways and means of neutralizing them.

The main ways and directions of implementing the conceptual provisions of national military security per se must be reflected in a scientifically substantiated military doctrine, which may be developed for a certain period.

A national military doctrine is not merely a system of officially accepted views on military and other issues; it is first and foremost a guide to action. The doctrine's provisions serve as a basis for the implementation of a broad range of political measures and actions in the foreign and domestic policy of the state.

The main requirements of the military doctrine are codified into laws and various normative acts, find their reflection in military strategy and operational art, and are expressed in specifics and detail in military rules, manuals, orders, and directives of the bodies of military leadership.

The optimum way to formulate a military doctrine is to conduct a multifactorial analysis within the system of priorities "national interest—threats—the means of countering them."

The doctrine's planks in various spheres must be realized in specific plans of economic development, and other plans, including in military-strategic planning. These plans may be given more precise and concrete contents in the president's annual report to the Supreme Soviet.

Going back to the problem of ensuring military security, I would like to emphasize that the General Staff clearly understands the real situation within which the tasks of military development and organizational development of the Armed Forces are to be accomplished.

Russia's situation differs substantially from that of the old Union state. The Russian Federation comprises: By territory—76%; by population—60%; and by gross national product—40-50% (taking into account production decline) of the respective indicators of the Soviet Union. In 1985, the USSR national income amounted to 57% of the national income of the United States. The national income of Russia amounts to only 17% of U.S. national income.

The geopolitical and geostrategic situation of Russia has changed dramatically. It has found itself even more removed from the center of Europe into the heart of

Eurasian continent, separated from the most important ports on the Baltic and Black Seas. Borders and neighbors have changed along a considerable part of its perimeter. Economic ties have been disrupted not only inside the CIS, but also with many states of Eastern Europe and the "Third World." Russia's defense potential has declined considerably, and perhaps this is one of the reasons why many neighbors permit themselves to infringe on its national interests and violate the rights of its citizens. There are more than enough examples of this: Territorial claims, discriminatory laws in regard to the Russian-speaking population, border incidents, armed seizure of ships, and others.

Russia's conventional arms combat potential in Europe, limited by the Paris Treaty of 1990, will be **four to six times less with respect to the quantity of ground-based arms and half as large with respect to aviation than that of NATO.** The groups in the northwestern and southwestern flanks have been especially weakened. Russia does not need to compete with neighboring states in its military might, but it has an obligation to ensure its own military security.

At the same time, as a result of the end of global confrontation of the "Cold War" period, favorable conditions have emerged for ensuring Russia's military security. Therefore, the General Staff's approach to the appraisal of threats to stability in the world and to Russia's national interests is now essentially a new one. The views on the potential character and scale of military conflicts have been revised.

There exists a considerable probability of flare-ups of low and medium-intensity military conflicts (including regional wars) both now and in the near future.

The nature of armed engagement in local, regional, and larger-scale conflicts may be dramatically different from that of the past wars. Potential military clashes will have **a clearly recognizable air-and-ground character and will be distinguished by fierce fighting for air, space, and sea superiority, and only at the concluding stage will the ground troops be brought into the battle.**

One may assume that military actions will be distinguished by the absence of clearly defined lines of engagement between the troops of the parties to the conflict, open flanks, and large gaps and stretches of space in the operational deployment of troops. Protracted positional fighting between groups of forces apparently will no longer be needed, which will lead to a reduction of the proportional weight of such types of action as breaking through a deliberate defense with the inevitable concentration of large contingents of troops at bottleneck sections of the front. The most typical type of combat will be "remote-control" combat, with the utilization of high-precision weapons rather than close-range combat. Maneuver will be a prevalent component in all forms of military actions.

We assume that **combat weapons super-systems (on the scale of regional groups and armed forces as a whole), created on the basis of the integration of modern and**

future means of intelligence and command and control of troops (forces), precise targeting, effective engagement, and radioelectronic jamming will become the material foundation and the theoretical basis of war and military conflicts. In this way, war becomes a battle of "high technologies," where the decisive role in achieving victory belongs to information and automation systems. Each soldier in such a war must be armed with the most modern means of combat and trained to use them.

Based on the geopolitical and geostrategic position of Russia, we have to realize that in the event of a war breaking out, military actions in some or other region (strategic region) will display not only the aforementioned general traits of armed combat, but its own specificities **determined by the composition and current state of the adversary, the state of infrastructure, physical-geographic and climatic conditions, as well as a number of other factors.**

Thus, even a preliminary analysis shows all the complexity of the problems associated with the need for an in-depth analysis of the processes taking place in the world; a comprehensive study of the possibility and character of armed conflicts and wars in the 21st century; and the impact of the totality of factors associated with it on the development of means of armed combat, organizational development of the Armed Forces, and military organizational development as a whole.

It follows that it is not possible to achieve the end goals of military reform without clearly comprehending the contents and the impact of the nature of future armed conflicts and wars on the direction of military organizational development and the shape of the Russian Armed Forces.

The purpose and tasks of the Armed Forces, potential goals, and the direction of their development—which may change as the situation changes—should be mainly defined on this basis.

The Russian Army and Navy are being created all over again. The part of the Armed Forces that we inherited from the former USSR was not on par with the existing tasks and modern requirements of ensuring Russia's defense capabilities. The groups of troops (forces) that it included did not form an integral military organism. A considerable part of the strategic reserves, most important elements of infrastructure, including parts of the system of state and military command and control and other objects, remained on the territory of the Baltic states, Ukraine, Belarus, and other sovereign states.

More than a year has passed since the president issued an edict creating the Russian Armed Forces. The General Staff is aware that we have a long way to go to reach the final goal. **We will be able to say that the organizational development of the Russian military is completed only when it is able to function as a single organism, from groups of troops and forces to systems of command and control, ensuring all types of support and the needed supplies and reserves, as well as military infrastructure.** Much has been done, but even more remains to be done.

Therefore, without dwelling on what has already been achieved, I see it as more expedient to **describe the problems that we have encountered and that hamper the process of building Russia's military organization.**

In creating the Armed Forces, we have to first and foremost deal with the current tasks: Completing the scheduled withdrawal of troops from the territories of other states to the territory of Russia and settling them there, implementing a considerable reduction of them, and dealing with social problems. Simultaneously, we need to finally decide on the structure of the Russian Federation Armed Forces. In order to do this, we have to complete its scientific substantiation.

The General Staff of the Armed Forces is concerned with the fact that the level of technical equipment of the Russian military with modern armaments and military hardware has turned out to be proportionally substantially lower than that of the troops deployed on the territory of Ukraine and the Republic of Belarus. Considerable quantities of most modern combat and military transport aircraft, tanks, infantry fighting vehicles, and armored personnel carriers remain outside of Russia.

In these conditions we have to search for new ways out of the current situation. As one of them—not inarguable, perhaps—we could concentrate existing material resources on modernizing existing armaments and military hardware, maintaining them in combat readiness through uninterrupted supply of spare parts and component materials. And at the same time direct the appropriations to a maximum extent into setting up scientific-research and experimental-design work in the area of creating future armaments and hardware that will meet the requirements of potential armed conflicts and wars of the future. By the way, this is not something new; other states do the same.

While dealing with priority tasks of organizational development of the Armed Forces, the Army and the Navy, together with internal troops and border troops **participate in the resolution of military conflicts both inside and outside the country.**

It should be emphasized that the need to create peacekeeping forces with the participation of the armed forces of most CIS countries for the purpose of resolution of armed conflicts and stopping bloodshed in the "hot spots" on the Commonwealth territory has already been discussed several times at the highest level (Kiev, March 1992; Tashkent, May-July 1992; Minsk, January 1993). The idea of creating multinational CIS peacekeeping forces, while supported by everyone, nevertheless remains unimplemented in practice to this day. So the Russian Armed Forces have to deal with these tasks on their own.

One of the sore spots for the Army and the Navy today is the **problem of adequate manning**, which has a negative effect on the general level and quality of combat readiness, as well as operational and combat training of troops

and naval forces. The strength level of units and companies has declined lately. Adoption of the law "On Military Duty and Military Service" with the current wording of its Article 21, regarding deferral from conscription into the military services, as well as the upcoming adoption of the law "On Alternative Service," which creates a broad range of grounds for assigning citizens to such service, may become a virtual catastrophe for the Russian Armed Forces, since there will be practically no one left to draft. Contract service will not fill this vacuum, since in order to introduce it, one needs time and—again—money.

Still, despite the problems facing the Armed Forces, the quality and intensity of combat training are beginning to increase. The training process in the Army and Navy is being conducted at all levels. For instance, during the winter period alone, a score of operational conferences were held for the commanding officers of the Russian Armed Forces, as well as command and staff training courses and military games.

There is one more important moment I would like to dwell on. It is **determining the appropriations needed to carry out the measures of organizational development of the Armed Forces in the new economic environment.** Any program can be carried out only if it is backed by financial resources.

Over the entire last year and the first half of the current year, we had to deal with tasks of the organizational development of the Russian Armed Forces in conditions of an acute money crunch. At this point, the situation with respect to financial maintenance of the Army and Navy remains critical. Minimum needs of the Ministry of Defense are not met in budget appropriations; the money allocated is not even enough to cover pay and salaries to personnel. As of today, we have received 1.6 trillion rubles less than we were supposed to. Cash pay for June and July has been held up; we cannot pay for deliveries of armaments and military hardware; the entire Ministry of Defense construction complex is on a verge of stoppage.

The Ministry of Defense has appealed many times to the president, the chairman of the Council of Ministers—the Government of the Russian Federation, and the Russian Federation Supreme Soviet to take steps in order to normalize the situation with respect to financial maintenance of the Armed Forces. However, these issues are being resolved with great difficulties.

In conclusion, I would like to emphasize that Russia needs very much both a security concept and a military doctrine. For this, it is necessary for all ministries and agencies, as well as our science, to take a direct part in their development under the leadership of the Russian Federation Security Council, including a most close interaction, of course, with the Russian Federation Supreme Soviet.

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Arbatov on NATO Expansion, CFE Impact

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[Article by Aleksey Arbatov, director of the Geopolitical and Military Forecast Center: "The West Will Not Defend Russia Against the West: The Countries of Eastern Europe Are Striving To Join NATO. Why? Against Whom?"]

[Text] President Yeltsin's consent to Poland's membership of NATO, which astonished everyone in August, and then his message to a number of Western leaders of directly opposite import—this was not simply another diplomatic oddity testifying to confusion in Russia's foreign policy departments. While in no way excusing such diplomatic style, it needs to be observed that the rearrangement of the European political arena in the aftermath of the Cold War remains an extremely contradictory matter. It is causing confusion in the minds of specialists and politicians not only in Russia but in other countries also.

New relations are taking shape spontaneously under the influence of multi-directional national interests and concerns. The most profound changes in military-strategic realities on the continent are affording extensive scope for the constructive establishment of states' new relations in the security sphere. At the same time, however, a number of countries could take unguarded steps which deform or even block the formation of a new system of collective security for a long time.

How Much Has Russia Been Weakened?

Europe's new military-political realities are so commonly known that we may confine ourselves to a simple enumeration of them: The unification of Germany; the collapse of the Warsaw Pact, the Soviet Union, Yugoslavia, and Czechoslovakia; the failure of "real socialism" in East Europe, Russia, and other post-Soviet republics; the political instability accompanying these changes and economic crises.

As a consequence, there is a reduction in the possibility of war between powers which were opposed in the past and, together with this, instability and an increase in armed conflicts in East Europe and the former USSR. The fundamental changes in the military-strategic balance under the influence of the said factors and the Conventional Armed Forces in Europe (CFE) Treaty and military reform in many countries, including Russia and NATO, envisage deep cuts in the armies and their massive pullback from overseas, the winding down of arms programs, and the reorientation of forces toward other assignments.

The CFE Treaty of November 1990 established equality in offensive conventional arms¹ at lower levels between NATO and the Warsaw Pact in a zone from the Atlantic to the Urals. But the disbandment of the Warsaw Pact and the abolition of the USSR shortly after broke up this orderly disarmament design. Countries' national quotas then had to be agreed on inasmuch as they had in the East ceased to be allies. And subsequently, in accordance

with an agreement in Tashkent in May 1992, the combat hardware of the Soviet Union and the negotiated authorization for its reduction were shared between Russia and the other former Soviet republics.

Geostrategically, all this entailed two changes of enormous significance. The first consists of a radical change in the balance of forces on the continent.

We shall adduce just the main indicators of this change. At the end of 1988, when Mikhail Gorbachev announced a unilateral reduction in Soviet forces and arms, the ratio of Warsaw Pact-NATO forces in terms of the principal types of combat hardware (which were subsequently encompassed by the treaty) constituted 2:7:1. In Europe the Soviet Union alone had twofold (!) superiority to all 16 NATO countries put together.

Following execution of the CFE Treaty, in the latter half of the 1990's, the balance will be the opposite, and the ratio of forces between Russia and NATO will be 1:2.8 in favor of the West. If, on the other hand, the former Soviet Warsaw Pact allies are added to NATO, the balance will be 1:3.7. If, however, for strategic extrapolation purposes, the forces of former Soviet republics in the European zone which are now independent states are added to the West, the ratio becomes 1:4.5 to Russia's disadvantage.

So the military balance in Europe has in just a few years changed for Moscow from its almost threefold superiority to its virtually fivefold lag. The scale itself and the speed of this change and the unwanted nature of the new situation cannot fail to give rise to acute concern in the military, whatever reassuring arguments it may adduce. Whence the natural reaction—concentrating as many forces as possible in the European part of Russia and using the existence of nuclear weapons as means of deterrence, having abandoned, in particular, even the USSR's purely declarative 1981 undertaking on no first use.

Strong As Before

What lies on the surface, for that matter, is not always true and, more often than not, simply wrong. Let us take a look at the situation from the other side and only from a pragmatic military-political angle, without resorting to loaded propositions of the "new political thinking," which set the teeth on edge.

Without any treaty Russia would hardly be stronger by the end of the 1990's on account of economic factors and the disintegration of military-industrial cooperation with other republics and in connection with the military reform. For example, in 1988 the USSR had ground forces numbering 1.6 million persons, who were armed with approximately 60,000 tanks with an annual manufacture thereof of up to 3,500. As of the mid-1990's, according to the plans of military reform of the Russian Ministry of Defense, the entire Russian Army will constitute 1.5 million men, of which the ground forces will account for a maximum of 600,000-700,000 men or even fewer.

With the creation of a professional army the need for enormous stocks of arms and equipment as part of divisions geared to the mobilization of millions of

reservists in the event of war will disappear. The emphasis on lighter mobile forces for rapid deployment in local conflicts will reduce the need for heavy combat equipment. According to the most approximate calculations, the Russian Army will need no more than 10,000-15,000 tanks, mainly for defense of the southern and eastern borders. Some 6,000-7,000 tanks will remain in the European zone; that is, approximately as many as authorized in accordance with the treaty.

If matters are approached from the other side, the production of tanks compared with 1988 has now declined fivefold, to 500-700 a year. Previously the giant tank fleet was replaced, even with that scale of production, every 20 years, on account of which a large part consisted of obsolete and obsolescent equipment. The new professional army of Russia must be furnished with the latest equipment, which the military understands as replacement of the tank fleet every 10-15 years. Even with the maintenance of present production and the use of the permitted warehoused reserves we once again arrive at overall numbers of approximately 10,000-15,000 tanks. The situation is similar with other types of combat hardware.

Despite all the changes in the military balance of recent years, Russia remains the strongest military power in Europe and one of the strongest states in the world in terms of this parameter. Let us even leave aside nuclear weapons, of which Russia will in 10 years' time, granted realization of the START II Treaty, have preserved approximate equivalence with the United States at the 3,000-3,500 warhead level and five to sevenfold superiority to any other nuclear power. Aside from this, in terms of the main categories of conventional forces, Russia will be superior to Germany by a factor of 2.4; France, by a factor of 3.7; Britain, by a factor of 5.4; and to the American forces on the continent, more than twofold.

There is no doubt that the state of the Russian Army is currently extremely grave. The already low army morale due to the difficult living conditions is sustaining additional damage as a result of the Army's involvement in ethnic conflicts. The use of the Army for purposes that are not part of its functions at the time of the October events in Moscow inflicted new moral damage.

All this is true, but these are predominantly self-induced problems, the result of miscalculations and the loss of control in Gaidarnomics, the democratic political transformations, the conversion of defense industry, military reform, and the organization of the new commonwealth of states in place of the collapsed USSR. They are the consequences of an inability not only to foresee but also to adapt in time to the social, geopolitical, and geostrategic changes.

The fundamental shifts in the military balance, as well as the arms reduction treaties, have nothing to do with it. Had Russia five times more forces and weapons, the situation would be no easier. Rather, the reverse is true;

the current problems would be exacerbated such that the economy, the state, and the army would fall apart completely.

Is Moscow Not Behind Us?

Moscow's military power has today retreated 1,500 km from the center of Europe, from Magdeburg and Prague to Smolensk and Kursk. For 45 years Soviet tank assault armies were within a two-week dash to the Channel, and air and missile forces with nuclear and conventional weapons could have incinerated all of Europe west of the Elbe in a matter of hours. And backing the forward armies were a further three attack echelons in East Europe and western districts of the USSR.

For the first time in 300 years (in peace time) the Moscow Military District has changed from being the deep rear to the forward edge of Russia's defenses. It is not surprising that among the military this fact evokes a keen sense of vulnerability: Having become accustomed to living under strong armor, it is uncomfortable to find oneself out in the open. That the Europeans were for decades in a far more vulnerable position—this was their problem, not ours. At the same time, on the other hand, Russia has a decided advantage over the Europe of the postwar years. For the first time in many centuries of its history Russia is not threatened by any attack from outside. And this, generally speaking, is a unique instance in the history of the downfall of empires.

The administrative-industrial heart of Russia is now beyond the reach even of the modern tactical attack aircraft of the biggest military powers west, south, and east. The 1,500 km corridor beyond which the Russian Armed Forces have pulled back from the center of Europe keeps the West's aviation beyond effective range and pulls Russian troops out of jeopardy. This, of course, on condition that the military bases of the United States and its allies are not moved eastward.

So, there are undoubtedly radical strategic changes to Moscow's disadvantage both in terms of the correlation of forces and in the geographical aspect. But these changes are basically of an objective and inevitable nature. And if we stop bemoaning a superiority which has gone irretrievably and take a fresh look at the realities, they contain positive aspects. The possibility of increasing the effect of the propitious aspects of the new realities will largely depend on Russia's policy. The objective changes dictate specific imperatives for a Russian national security concept and policy.

Four Imperatives

The first is that the realization of the CFE Treaty (as also of START I and START II and other disarmament agreements), corresponds, on the whole, to Russia's interests. Individual shortcomings of the treaties are repaid with interest not solely by their political significance. Without the treaties, by virtue of economic and many other reasons, Russia would hardly be capable of

having appreciably greater military power in the foreseeable future. Yet the other powers, given sufficient political motives, were perfectly capable of a sharp buildup of forces and the winning of undisputed superiority—from the viewpoint of their economic, technical, and demographic potential, the advantageousness of geostrategic location, and the possibility of interaction.

It is extremely short-sighted for Moscow to present ultimatums and threaten to pull out of the treaties, even if they are unsuitable in some respects. That a rapidly changing situation frequently entails the obsolescence of this clause of an agreement or the other is another matter.² For that matter, it still needs to be sorted out if the problems are that great and if there are no other ways of resolving them. But the main thing is that, given favorable political conditions, it is possible to go further and put into practice subsequent agreements with regard for new problems of security and the possibilities of their solution; provided that there are new ideas and that the administrative machinery can implement them. This is the **second imperative**.

The **third imperative** is conditioned by aspects of the changed strategic balance. Russia remains militarily a leading power of Europe and the world and can count on respect and security—this is determined by the numbers of the forces and arms. But as a state opposed to NATO, especially a NATO together with the East European countries and with the association of the Western republics of the former USSR, Russia has no chance.

The hopes that nuclear weapons and a revival of the principle of their first use would be a panacea against all troubles are illusory here. We are not talking about an actual big war, in which the use of nuclear weapons on both sides is unavoidable. We are talking about a resumption of the Cold War with its military-political pressure, the exhaustion of the enemy in local conflicts, economic blockade, suffocation in geopolitical isolation.... Nuclear weapons are no argument here. Both sides have more than enough for neutralizing any bluff or blackmail. The Soviet Union could not sustain such a "package." Gorbachev began to extricate himself from it thanks to "new political thinking," and the internal processes which it spurred brought down the communist empire completely.

Even less could postcommunist Russia sustain this. Nor does it need to. Preventing the revival of an enlarged anti-Moscow coalition of states will depend on Russia itself, in the main. Democratic transformations within, good-neighbor relations with near and distant foreign countries (which is by no means the equivalent of being led around by the United States on all matters), reining in its own neoimperial propensities, high-minded defense of clearly and rationally formulated national interests—this is all that is required of Russia.

The **fourth imperative**. The retreat of Russia's military power from the center of Europe has entailed for Moscow not only unaccustomed weaknesses but also

unprecedented advantages in the sense of the distant disengagement from the forces of the major military powers of the West. Firmly establishing this disengagement is a most important task of security strategy.

It is primarily a question of the assurance of the neutral and nuclear-free status and independence and security of the dual belt of states of East Europe and the western republics of the former USSR as a pillar of the new system of European security. For many centuries these countries were a springboard sometimes for the West's aggression against Russia, sometimes for the other way about. Henceforward West Europe, the United States, and Russia should be guarantors of these countries' neutrality and security and should convert them into a bridge of the economic and political cooperation of Russia and the West closed only to military traffic going east or west.

No One Needs a 'Drang Nach Osten'

The possibility in this connection of the expansion of NATO thanks to the admittance of Poland and a number of other countries would run counter to Russia's interests and the new concept of European security. No one is occupying Poland and no one threatens it either from the West or the East. Its desire to join up with West Europe as quickly as possible is perfectly understandable, but NATO is hardly the best mechanism for this. The main conduits of European integration are the European Community and the Western European Union, NATO, on the other hand, was and basically remains a military-political coalition of states intended for collective defense.

If Warsaw fears a revival of Russian aggressiveness, taking such serious steps on the basis of abstract assumptions would mean setting in motion a self-fulfilling prophecy. Truly, following the October revolt, the situation in Moscow remains unstable. But it is in such a situation that Poland and the West should refrain from actions which could push the pendulum in an undesirable direction. And were a new Russian geostrategic offensive against the West to become a reality in the future, Poland would have sufficient time for adopting the appropriate measures (membership of NATO included).

From the NATO viewpoint, extension eastward is fraught with several serious problems. Having commenced such a movement, stopping it would be difficult. The incorporation of Poland would immediately raise the question of the incorporation of the Czech Republic and Hungary. Once the forward edge of NATO ran along the border of Ukraine, Belarus, and Lithuania, the latter would naturally ask whether the alliance's defenses were not targeted against them. If not, why not admit them also? And then, in accordance with the same logic, the question of Russia would arise. Not to include it would mean making it unequivocally understood that NATO

was aimed against Russia. And so on, to extrapolate this logic to the absurd, right up to Central Asia, China, and Japan.

Having shown itself historically to have been an effective mechanism of collective deterrence of a common enemy, NATO could perfectly well prove to be inadequate to the new realities and tasks following the Cold War. The tragic epic of Yugoslavia has revealed NATO's incapacity for being a cease-fire and peace-keeping mechanism. The main role here is being performed by the United Nations and multilateral diplomacy.

Actions against regional aggression and for curtailment of the proliferation of nuclear weapons and missiles outside of the bloc's zone of operation (Iraq, North Korea) have been mounted without the knowledge of NATO.

Of course, it is not a question of it being time for the dissolution of the North Atlantic alliance. It is a factor of stability, and without it a dangerous vacuum would form on the European continent, primarily on account of the uncertainty of the role and place of a united Germany. The armed forces of NATO countries are being cut back appreciably and are being restructured for different assignments. A large part of the American forces will be withdrawn from Europe. The experience of interaction and the administrative structures and forces of NATO could be an important component of a future system of collective security in Europe.

But something else has to be seen. The main reason for the preservation of NATO in the foreseeable future is, for all that, the unpredictability of the further development of events within Russia and of the evolution of its foreign and military policy. It is for this reason that Russia will never obtain full membership of NATO. Its return to the path of imperial expansion and authoritarianism would simply revive NATO's original function as a mechanism of collective geostrategic deterrence of a common enemy. On the other hand, the establishment of democratic principles within Russia and its foreign policy would ultimately remove the need for NATO. A fundamentally different regional multilateral security organization aimed not against a common enemy but at observance of the rules of mutual relations and the peaceful solution of conflicts between its members should come to take its place.

Boris Yeltsin's message to the leaders of a number of NATO countries contained in principle the right idea of NATO and Russia being the guarantors of the security of the neutral states of Europe located between them instead of NATO's extension eastward. But in order for this idea to be embodied in practice, a simple statement of guarantees is not enough—a military and political concept of the rearrangement of Europe is needed.

Strategic Pillars of European Security

The armed forces of neutral countries should be reduced and restructured on the principles of nonaggressive

defense. This would be in keeping with their modest economic possibilities and would reassure those in Russia who think in categories of worst-hypothetical-external-threat scenarios.

Abstracting ourselves from the CFE quotas, there are no rational reasons for keeping in the European part of Russia 18,000 pieces of armored equipment and over 4,000 aircraft—more than on the eve of World War II. Just as there are no reasons for Ukraine to keep 9,000 tanks and armored transport vehicles and 1,400 aircraft and helicopters. The territory of Ukraine, Belarus, and the Baltic and also the Russian Moscow and Leningrad and the western North Caucasus military districts should be a zone of the reduced concentration of ground and air forces.

Clearly, the withdrawal of Russian forces from overseas will require prepared rear facilities, and, as a temporary situation, their concentration in the European part is permissible. But for the long term, when the reduction in and reform of the army are quite far advanced, the rear infrastructure should be brought into line with the necessary deployment of the forces, and the latter, with the potential military threats emanating chiefly from the southern and eastern directions. Otherwise the result will be the other way about: The presence of bases and facilities (built in the past for a war with NATO) will determine the stationing of the forces; and it, in turn, will materialize military threats, frightening neighbors and provoking them into countermeasures.

Agreements of Russia and the neutral countries should for greater confidence be tied in with NATO commitments. For example, undertakings should be given that NATO will not extend eastward and that members of the alliance will not deploy their troops, forces, or military facilities there. The troop and force levels of the NATO states would be additionally reduced and reoriented for the tasks of terminating conflicts and for peacekeeping. It would be useful to limit the development and deployment of conventional precision arms of enhanced range and destructive power. Finally, the development of the interaction and interdependence of rapid-deployment forces of Russia and NATO as a means of economizing on resources and as a safeguard against military actions is needed.

To Avoid Subsequent Reproaches

Poland's membership of NATO could nip in the bud the building of the edifice of European security based on West Europe, the United States, Russia, and a large bloc of neutral states. And it is not a question of the Polish step unflinchingly and immediately creating a military threat to Russia—a number of NATO countries (France, Denmark, Norway) do not have foreign troops on their territory, and Poland could follow their example. The danger is that this event could once again set in motion a chain reaction of the "filching" of the neutral security

belt of Europe between the West and Russia, as a result of which they would once again come up against head-on opposition.

Russia's military engaged in long-term strategic forecasting would decide: Since NATO is without any visible reason moving eastward, it is Russia's duty to push back the defense lines as far westward as possible. This would influence Moscow's policy in respect to Kaliningrad Oblast, the Baltic, Ukraine, Belarus, Moldova, and the East European countries, and a buildup of forces in the European part of Russia would begin. Territorial and ethnic conflicts and clashes over the share-out of the military, including nuclear, legacy of the USSR would intensify. Russia's neighbors in the West would perceive this as a threat to their security and would get in the NATO waiting line.

Instead of in-depth reform and the strategic reorientation of defenses southward and eastward, Russia's military departments would return to their customary business—planning for a large-scale and conventional and nuclear war in the European theater.

As a result, things would be bad for everyone, but most of all for Russia with its economic, political, and military problems. After all, no concentration of troops and forces would diminish the vulnerability of the center of Russia simply by virtue of geostrategic factors and the overall correlation of forces. Of course, it would then be easiest of all to accuse the other side for all the problems. However, Russia's responsibility for a possible negative development of events has to be seen also.

It amounts to the uncertainty and fear that are engendered in neighboring states by the spasms of the domestic and foreign policy of this vast nuclear power. It amounts to the absence of a new realistic military and political-legal concept of European security which Moscow could offer Europe as an alternative to NATO's extension eastward. Here it is up to Russia, there will be no help for us from overseas.

Footnotes

1. Classed as such were tanks, armored vehicles, artillery, and combat aircraft and helicopters.

2. Specifically, it is a question also of the quota for Russia's flank zone, which prevents an increase in forces in the North Caucasus Military District.

Impact of Rejected Taxes on Military

94UM0098A Moscow KRASNAYA ZVEZDA in Russian 24 Nov 93 p 2

[Article by Vladimir Yermolin under the "Point of View" rubric: "Taxation and Rumormongering"]

[Text] The other day, Vyacheslav Kostikov, press secretary of the President of the RF [Russian Federation], made a statement in which he expressed the view of the Supreme Commander-in-Chief relative to the

bill proposing that military personnel be made subject to taxation. The President is not in favor of providing the treasury with revenue using this method. The Council of Ministers also does not support this proposal advanced by the Minfin [Ministry of Finance]. Thus, one may assume that the matter is closed for the near future, or, to put it more accurately, the matter has been put on a back burner.

Several attempts to lower the costs of a non-production sector, such as defense, have been made by finance officials in the last few years. More attempts will undoubtedly be made in the future. There apparently is no point in raising a voice of protest against this, for our financial minds find it irresistible to economize on military pay by taking advantage of the situation—military reform. I wish to stress that the issue here is none other than military pay. The process of curtailing defense production and scientific research in this area, of reducing Army and Navy manpower, and of cutting back on weapons and equipment purchases has been in progress for some time, but it most likely is not as successful as the same Ministry of Finance would like. One is led to believe that specialists see a definite advantage to taking money out of one state pocket and putting it into another, which in essence the taxation devised in the catacombs of the solid department seems to be.

The sights are set on more than taxation. Also in mind is eliminating a list of social privileges established for military personnel. This includes housing and communal services allowances, the recently granted free public transportation privilege, and others. These would be replaced by an increase in pay.

Strictly speaking, it is the direct responsibility of state people to save the treasury's rubles. And that leaves no room for emotions. It must be assumed that those who take up the job of improving the social protection system for military personnel and the latter's financial security are operating on the basis of state interests—not their own. Then why is this being done by virtue of the good old traditions: Behind closed doors, behind a thick curtain of departmental secrecy? Why does no one speak to the interested audience (the pages of KRASNAYA ZVEZDA would be fine in this regard), providing figures and applicable arguments, stating that here is a plan professionally drawn up, one which combines the state's and your interests?

Instead of the above, there are rumors shaking up the Army like thunderbolts: "Someone said that the privileges are to be cancelled, but someone else is sure that they will not be cancelled but that military pay will be frozen, while another person yet said something else." The editorial office's telephones are ringing off their hooks every day, with nervous voices demanding explanations and refutations. In wardrooms and officers' mess halls, discussions of "reliable news" are ruining people's appetites and causing them to think unhappy thoughts.

One cannot help but wonder: Could someone be launching rumors on purpose? All the more in a pre-election time?

Who would want to see the Army and Navy, which are already suffering in these difficult times, sit and wait in a state of anxiety? Privileges are granted one day and taken away the next. Military pay is increased one day, while the following day inflation and taxation team up to reduce this to the cost of living minimum. Who could derive an advantage from seeing a military man deprived of his elementary protection under law, not knowing if he will be able to feed his family tomorrow? We all see it all too clearly: Legal instability is pushing the Army to where it should not be in a normal state: In the arena of political struggle.

I do not wish to be misunderstood: This is not a matter of raising the roof over a ruble or two (although, as in all Russian working families, there is no "surfeit" of rubles). When it comes to drafting a state program of social protection for military personnel, this is to be done openly, in the light of day. On the one hand, this would deprive political intriguants of "capital," and, on the other, it would demonstrate to everyone—primarily to the man wearing shoulder boards—that suitable relations are being established between the state and military personnel.

In my view, this kind of discussion is in order, all the more since the media are increasingly vocal in type-casting the existing package of military legislation as detrimental, a faulty product of a faulty parliament. No one has taken from those possessing the legislative initiative the right to review and improve laws. However, public crucifixion of laws which have not been abolished by anyone is a dangerous exercise. All the more in an environment in which civil law and the military order were always held sacred.

Thus, the statement of the RF president's press secretary did something to cut the rumors down to size. However, there is no doubt that the rumors have already initiated their destructive work. No one knows how many young persons intending to devote their lives to military service have had second thoughts: "Is it worth it? Is it not better to take the matter of social protection into your own hands and avoid entrusting it to a state official who keeps changing his mind?"

I am not prone to idealizing foreign experience, since in our country we surely have our own situation. Military personnel in the USA, Japan, and a number of other countries which for us are "models" pay taxes the same as all other citizens. If they do enjoy departmental privileges, the latter are part of a general system of benefits for state workers. However, in addition to various "supports"—housing allowances, free medical care, favorable insurance, and others—our foreign colleagues may have a most significant guarantee, that of stable legislation. Also, the military budget in the same United States is not arbitrarily slashed two or three times

a year, with \$261 billion for 1994 (one must assume) being a reliable "social protection" for American military personnel against any economic shocks.

In a country where poverty has claimed just about a quarter of the population, we are not asking for a lot (talk of billions of dollars is out of the question), but one dares hope that we will also have a system where a package of military legislation will acquire somewhat more inviolability than a tear-off calendar.

Gromov on Army's Role in Neighboring States

PM2911104593 Moscow KRASNAYA ZVEZDA
in Russian 27 Nov 93 p 2

[Interview with Colonel General Boris Gromov by Aleksandr Golts; date and place not given: "Peacemaking Is Not Just the Concern of the Military"—first paragraph is introduction]

[Text] This conversation took place on the plane, when the considerably tired Russian delegation headed by the foreign minister was returning after difficult visits to Uzbekistan, Kazakhstan, and Tajikistan. Military questions, whether the problems of the peacemaking forces in Tajikistan or the problems of nuclear weapons on the territory of Kazakhstan, occupied an extremely important place in the talks with the leaders of these states. One of the key figures in the talks was Russian Deputy Defense Minister Colonel General Boris Gromov. It was to him that I addressed my questions.

[Golts] Boris Vsevolodovich, today many people are worried by the situation in which the coalition peacemaking forces in Tajikistan, including the Russian troops, find themselves. As former commander of the 40th Army you know this region very well. Tell me, do you not get the impression that right now in Tajikistan we are seeing another Afghanistan? After all, Soviet troops were initially sent in there allegedly to protect the borders of a friendly state...

[Gromov] Of course, associations arise. The methods of conducting combat operations are similar, indeed the political situation is in some respects reminiscent of Afghanistan. At the same time I wish to say that Moscow has drawn all the necessary conclusions from the Afghanistan events. The main thing here is that we immediately and unambiguously set the troops the task of avoiding participation in the internal conflict and refraining from supporting any side. Their function amounts to supporting the border troops and guarding important facilities on Tajik territory.

[Golts] The report to Dushanbe by Colonel General Boris Pyankov, commander of the collective peacemaking forces, sounded quite alarming; especially in the context of the reassuring arguments which we have heard from Tajikistan's political leadership. What do you think: How will the situation in that country develop?

[Gromov] The situation is extremely difficult even now. Moreover, it is not only a question of the situation on the border, which attempts are made to cross almost every day. The situation inside the country is also far from simple. Claims that there is no opposition there hardly correspond to the truth. If that were the case, where would the armed formations be expecting to find support? The current lull should deceive no one. Combat operations usually fall quiet in wintertime in this region. They are using the winter in order to build up their forces and create stores of weapons. But when the warm weather comes, when the passes open, they will move up their main forces in order to seize power.

The political dialogue with the opposition must therefore be stepped up right now. The initiative here, in my view, should belong to the official authorities.

[Golts] Another acute problem facing all three republics which we have visited is the problem of Russian-speaking citizens. Moreover, it seems to me that this has an army angle, so to speak. The national armies contain quite a few officers who would be willing to serve anywhere at all, provided it was in Russia, in our Armed Forces. Do you think that the ministry can help them?

[Gromov] There really are a lot of difficulties here. When the national armies were formed, for both objective and subjective reasons a considerable number of Russian officers found themselves in them. Some took the oath of allegiance and signed a contract. Now many of them want to return to the Russian Armed Forces. From a human viewpoint I can understand them. And, I given you my word of honor, would be ready to help each and every one. I do manage to help one or two. But the whole trouble is that we also have to resolve very difficult questions connected with social guarantees for servicemen in Russia itself. It is not easy to find room for officers when the Armed Forces are being significantly reduced. You will understand that we simply cannot allow a mass return to the Russian Armed Forces from national armies. To do so would mean undertaking a commitment which we are unable to fulfill.

[Golts] Was the question of the future of the nuclear weapons located on the territory of Kazakhstan broached in Almaty? Possibly I am mistaken, but it seems that the republic leadership's position is not too different from the approaches of their colleagues in Kiev, with the sole exception of open statements about their possession of nuclear weapons.

[Gromov] This question was raised on a fact-finding level in the course of my meetings with the Kazakhstan Armed Forces chief of staff. My task was to clarify whether the situation on the strategic nuclear weapons question had changed. Almaty can be seen increasingly backing away from commitments enshrined in many documents, beginning with the Lisbon protocol. These commitments, let me recall, consisted in granting Russia all authority over nuclear weapons

This approach creates serious problems, and not only political problems. Very soon problems of ensuring nuclear safety may arise. Already the guarantee periods of some nuclear weapons located in Kazakhstan have expired. And these weapons can only be recycled on Russian territory. They tell us that Kazakhstan would like to receive compensation for the recycling of nuclear weapons, and also security guarantees. We are showing readiness to resolve these issues. However, we are not seeing any reciprocal moves.

[Golts] Boris Vsevolodovich, I would like to return to one of Russia's main military-political problems in the neighboring foreign countries. Namely peacemaking. Moreover, the question is not whether such operations should be carried out or not. After all, right now there are politicians who are talking not about maintaining peace but about "compelling peace," about establishing peace by force.

[Gromov] I believe that in general it would be a mistake to reduce peacemaking to military operations alone. Our participation should crown political and diplomatic efforts, and only in the event that they are successful. If there is an agreement between warring sides, and troops are sent in with their consent. Then peacemaking forces have a chance of success; for example, as is happening now in South Ossetia. Something is also being achieved in North Ossetia and Ingushetia.

But it is impossible to establish peace by force. It is only possible to localize a conflict for some moment. If we are talking about establishing peace through the use of armed force, then we are deceiving both ourselves and those we are trying to convince. Just think what it means to part two warring sides when they have not reached an armistice agreement. It means that you have to separate them through combat operations, to fight a war first against one side, then the other. And to become the enemy of both.

And a second factor: Russia's Armed Forces should not fulfill tasks on their own. They should do so in close contact and with the direct participation of the armies of other neighboring states.

[Golts] But in general, in your view as a military chief, is the modern army adapted to fulfill such operations? Operations in which it encounters constant provocations, to which it cannot respond proportionately?

[Gromov] I have been thinking about this for a long time. My Defense Ministry colleagues and I have discussed the problem frequently. In effect, in the course of peacemaking operations army units are frequently obliged to fulfill the functions of internal and police forces, terms which in the given case have no meaning. But this requires intrinsically different training. At the same time, today we are also faced with a difficult task, even as it is: To create a modern, mobile army that is not very large in size. But if that is so, it should handle only

one task—preparing the defense of the country. Peacemaking is close in content to this task, but is not exactly the same.

Let me stress once again that the Russian Armed Forces are being forced to perform peacemaking operations right now. Such is the stern necessity of our times. But peacemaking is by no means a task for the Armed Forces alone.

STRATEGIC DETERRENT FORCES

Questions Raised on Size of Nuclear Stockpile

94WP0031A Moscow NOVAYA YEZHEDNEVNAYA GAZETA in Russian 24 Nov 93 p 1

[Article by a military expert of the investigative service of NOVAYA YEZHEDNEVNAYA GAZETA: "Not Even the CIA Knows How Much Uranium We Have, and We're Even Less Informed"]

[Text] Continuous collection of information on the amount of Soviet (and now Russian) uranium suitable for making nuclear weapons has been one of the strategic objectives of the U.S. Central Intelligence Agency for many years; because by having such data, the Americans would naturally be able to calculate more or less precisely how many nuclear warheads their "potential adversaries" have. A few years ago, for example, a research council under the U.S. government presented a report stating that the USSR had 33,000 nuclear warheads. Casper Weinberger, who was then the U.S. secretary of defense, did not agree with this information, declaring that the USSR had 46,000 nuclear warheads (the defense secretary was doubtlessly relying on CIA data). But neither the commission nor the defense secretary was right: The former erred by 13,000 and the latter by a thousand warheads. Such impermissible "errors" occurred not because American agents worked poorly, but because the system in the USSR for producing uranium and warheads was so confused that any attempts to sort it out presented great difficulty even to our own specialists.

Judging from everything, even today the quantity of uranium suitable for production of nuclear armament remains to the Americans a mystery behind seven seals. Rather contradictory figures are cited. A year ago, when President Bush announced the USA's agreement to purchase 500 tonnes of uranium from Russia, his nuclear analysts stated that this would be a large fraction of Moscow's uranium. By the way, this contract can bring Russia income of around \$12-14 billion. The authorities in Moscow attach extremely important strategic significance to this deal, hoping to put an end to Russia's slide into the abyss of poverty by replenishing the treasury.

Characteristically, many American experts in "uranium reconnaissance" felt that 500 tonnes was almost Moscow's entire reserve. But when Moscow agreed with Bush to sell this amount of uranium, almost all American analysts began asserting that Russia possessed much greater amounts, which is something that the CIA is attempting to prove to the U.S. leadership. The size of Russian uranium reserves was immediately raised to 800-900 tonnes. There is information that Moscow was ready to sell even more than 500 tonnes of uranium to the USA, which is evoking another commotion among American intelligence agencies. Some Russian officials (for example Viktor Mikhaylov, who heads the Ministry of Atomic Energy) are saying absolutely officially that "the minimum total reserves, including uranium already in warheads, exceed 1,200 tonnes, which exceeds the total reserves of all countries by 1.5-1.7 times." In that same Mikhaylov's opinion, the 500 tonnes of uranium that are to be sold "represent approximately 30-40% of all of the reserves we possess."

Consequently, it turns out that Russia's potential uranium reserves today are from 1,500 to 2,000 tonnes.

Many independent Russian military experts feel that replenishing Russia's wretched treasury by selling uranium is already becoming one of the strategic means of salvation of the reforms in the country, and ultimately of the government itself. At the same time, they express serious apprehensions in connection with the fact that the sale of uranium is not always under the strict control of the corresponding Russian agencies. It is said that thus far, there have been 8-10 cases of unlawful sales of uranium abroad. But no one can know how many such cases there actually have been. Russia's mafia organizations attach special significance to the hunt for nuclear devices.

All that needs to be added is that many highly placed Russian military servicemen are watching Russia's uranium trade with the USA with great alarm. Many of them do not understand why Russia needs to strengthen America's nuclear might and expend its own strategic uranium reserves when the fuel situation promises to be extremely complex in the future.

Representatives of the Russian Federation Ministry of Security (S. Stepashin) already openly admit that cases of misappropriation of uranium and uranium products are occurring in Russia. For example, in late 1992 a consignment of low-enriched uranium was stolen from the Cherepovets Machinery Plant in the city of Glazov.

As a result of actions taken by the Ministry of Security, 60 kilograms of uranium were seized from criminals in Izhevsk and 36 kilograms in Brest. Around 20 persons have already been arrested, including foreign citizens.

Discussion of Work on Nuclear Weapon Control Systems

94UM0101A Moscow KRASNAYA ZVEZDA in Russian
30 Nov 93 p 2

[Article by Yuriy Leshchenko, general designer of the Research Institute for Automatic Equipment, institute director Stanislav Chudinov, and Vladimir Shimko, president of the "Radiokompleks" corporation: "Rules of Life for Academician Semenikhin: About the 'Nuclear Button' and Those Who Created the System for Controlling the Country's Strategic Forces"]

[Text] Much has been published in the press about the developers of strategic nuclear weapons and their delivery systems—intercontinental ballistic missiles, submarines, and bombers. But far in the shade remained the names of those who created the system of combat control of all kinds of these weapons, those who interwove the staffs and command posts into a unified whole, and those who brought together the computer hardware of the higher and lower echelons. All of this information is related to the category "top secret."

Today for the first time we tell about the life and work of Vladimir Sergeyevich Semenikhin, an academician, Hero of Socialist Labor, and winner of the Lenin and other state prizes. He was a principal theoretician and organizer of the creation of high-power automated information systems for military purposes.

As soon as the first ballistic missiles appeared, the problem of the "launch button" arose. To whom should it be entrusted? After all, the responsibility is enormous. The decision on its possible activation had to be made at the very highest level of authority.

And this required a reliable system for the collection and processing of information, special communication channels, and the full coordination of all strategic forces. It was necessary to preclude any random access to the system and even the slightest possibility of the unsanctioned launch of a missile with a nuclear warhead or dropping of an atomic bomb. The establishment of such a system was entrusted to specialists from the Research Institute for Automatic Equipment.

So, it is the end of the 1950's and beginning of the 1960's. The institute is toiling on a project for an automated control system but nothing results. The work breaks down. Then they remember Semenikhin. At this time he is managing a design bureau at an electromechanical plant in Zagorsk near Moscow. Here they successfully develop and put into operation a regimental system for the control of the antiaircraft missile systems of the country's air defense—it was called "Vektor." At the same time, for the air defense of the ground forces, they build a "Krab" system. They create their own computers and semiconductors for it—for the first time in the country! For the first time precisely Semenikhin applied the term "automated systems" (stressing, as it

were, the role of the operator in them) to the tactical-technical tasks for "Vektor" and "Krab." Prior to this time, they tried to call them automatic or semiautomatic. It would seem to be provincial, but everything works out fine there in contrast to the institute in the capital, where they have a brain center and high-power cooperation and nothing happens....

In May 1963, by decree of the Central Committee and Council of Ministers, Vladimir Sergeyevich was appointed director of the Research Institute for Automatic Equipment. He came, worked a little, took a good look, and began to reorganize everything in his own way. The fact is that the institute was then subdivided into many departments. Each department head was his own boss who reported directly to the director. But the creation of a system requires the participation of 15-20 departments—design, technological studies, departments for specific subjects and programs.... try to coordinate the actions of so many independent units. All of the effort goes into the resolution of particular organizational matters.

Semenikhin proposed the establishment of three scientific-technical centers. This principle of organization of the institute has been retained even now, only the number of scientific-technical centers has been increased to eight. Vasily Vasilyevich Konyshov was appointed manager of the first center, Vladimir Isaakovich Drakin manager of the second, and Mikhail Sergeyevich Loginov manager of the third. Konyshov and Loginov are still working at the institute in these positions. Drakin became general director of "Voskhod" Research Institute.

Things got moving after this structural reorganization. Not everything went smoothly, however, especially at the start. There arose even the dramatic situation in which some tried to put in doubt the very presence of Semenikhin at his post as director. At that time, Vladimir Sergeyevich lay in a hospital and could not fight. His companions-in-arms fought for him. And they prevailed. The collective believed that the system (it was called "Center") could be established regardless of how complex it might be. This was the first and, perhaps, the principal victory.

The project was successfully completed in 1967 and refined in 1973. Field testing of the system began in 1979 and it was put on alert status in 1984. Semenikhin received the title of Hero of Socialist Labor for putting this system into operation. Vasily Konyshov and Mikhail Loginov were awarded the Lenin Prize. Marshals S. Akromeyev and N. Ogarkov also received Lenin prizes as authors in the collective. And this was well earned. The system of military command and control is the prerogative exclusively of military people. And they flew many times to the Far East and to the north and south to tune up the system.

It must be said that from the very start of the tests Semenikhin remained at the test range continuously. He perfected elements of the system and was content only when the final touches were made in the reports on the testing.

There was one memorable event in Kapustiny Yar. During operational launches of missiles, a young officer was assigned the task of assessing the effectiveness and reliability of the work of the computer complex. He wrote a negative comment in the record. The leadership began to put pressure on him. He did not want to ruin his relations with his superiors but he did not to along with them. When Semenikhin found out about this, he immediately went to the staff, to the office of this officer: "Volodya, tell me what is going on there."

It was all simple, still another confirmation that radio engineering is a science about contacts. The cells from which a computer complex is made are themselves extremely reliable. But they were first grouped in interchangeable circuit boards with multiple-contact plug and socket units. And they often failed. Vladimir Sergeyevich immediately made the decision to solder them. It would seem to be a violation of the very principle of rapid disassembly. But no, it is enough to pass a heated solderer over the rear metallic plate and the detachment is ready.

Subsequently, Semenikhin looked after the fate of the principled officer. Today he, Major General Vladimir Kuznetsov, is chief of a scientific-technical center of the institute. In general, Vladimir Sergeyevich or "VS," as they referred to him, managed to assess an individual quickly and accurately and was not afraid to promote young specialists. All of us, managers and ordinary engineers and designers, who were near him felt that we were disciples of Semenikhin, because he knew how to approach everyone and captivate with ideas. And he was very accessible. It would seem that a hero, academician, and Supreme Soviet deputy would not have time but a technician, driver, or cleaning woman could come to him with their troubles and problems.

The command and control system created under the leadership of Semenikhin is on alert duty even today. It links not only the control of the Strategic Nuclear Forces but also the districts and central staffs. It includes quite unique computer complexes of domestic production. We were able to create super-reliable hardware on our element base. For example, the SOD—data exchange system—has a reliability rate of almost 100%. Semenikhin liked to put it this way: "With the help of computer technology, we can process all the volumes of the entire Soviet encyclopedia into digits and transmit the information through communication channels and make a mistake of just one letter."

A new theme appeared in 1980—"Kazbek." This is the president's "little nuclear suitcase" that everyone is familiar with. It is a unique element of the system for the command and control of nuclear strategic forces. In essence, it can be represented as a miniature mobile control facility for the case of a surprise nuclear attack against the country. This was during the time of great confrontation in the Cold War. "Pershings" in Western Europe, submarines in the North Sea and Mediterranean.... The perspective systems for radio warning were

supposed to transmit messages to the head of state no matter where he was. It was necessary to assess the situation in a matter of seconds or at most a minute and make a decision on the unblocking of the system for the launch of missiles. Just such a "little suitcase" also had to be made for the defense minister and for the chief of the General Staff.

This was quite an undertaking. It was necessary to provide for all kinds of trips by the holder of the "little suitcase" and for the places for his work and rest. The equipment had to be accommodated in a compact and convenient form for transportation. They chose an ordinary black "diplomat" with metallic edges. Its weight with equipment was on the order of 10 kg. They put the system on alert duty in 1984.

There is such a concept as "spin-off"—side effects from the application of the results of scientific research in related areas. This was a vital principle for Semenikhin. Besides large information systems, he actively involved himself in projects for conventional domestic computing machinery and a broad spectrum of radio equipment. They knew him in all major medical centers, for example. But when did the extrasensory people show up? After all, there was persecution and there were prohibitions. Despite everything "VS" organized a laboratory for them in the center of Moscow. He somehow came up with money for its existence and followed the work.

I recall how they turned to us from the Ministry of Internal Affairs. They got the idea of linking all patrol vehicles in Moscow to a single communications system. Semenikhin immediately proposed a variant of that. So the project of the "Patrol" system appeared. It was rather substantial. All of the patrol vehicles and their routes are illuminated on the display board of the duty officer. As soon as a robbery is committed somewhere, the report goes to the duty officer and simultaneously the automated system selects the closest patrol to the place of the crime and gives the address. The duty officer may intervene in the report, gave additional instructions, and follow the course of the vehicle to the site.

Staff members of the institute performed scientific research work in one of the rays of the capital and established a radar field. They set up "friend-foe" identifiers in patrol vehicles, a radio station, and a computer. At the present time, the system has already been introduced in part. Kazan made an analogous order. There we are planning to carry out a project for the automation of law-enforcement agencies in general.

...Yes, there are people who leave a lasting mark when their life is over. No one can replace them, because they were giants who gave birth to whole directions of science and technology, assembled people, and established their own schools with experience and traditions.... And this is for generations. Vladimir Sergeyevich Semenikhin was precisely such a person. He was not only a general designer but a general human being as well.

GROUND TROOPS

Radio Communications in Motorized-Rifle Battalion

94UM0070 Moscow VOYENNY VESTNIK in Russian
No 9, Sep 93 pp 47-51

[Article by Colonel P. Kostevyat, senior instructor at the Military Academy of Communications: "Radio Communications in the Motorized-Rifle Battalion"]

[Text] The tactical conditions (type of battle, terms of entry into it, nature of the combat operations), the role and place of the subunit in the order of battle, the combat mission, the organization of coordination, the system of command and control and the capabilities of the enemy to defeat it, as well as the terrain, season and time of day, all have an effect on the organization and support of radio communications in the MSB [motorized rifle battalion]. Communications in the battalion also depend to no small extent on the state of the hardware and the experience of the specialists.

We will consider how to utilize radio communications most expediently today in the interests of maintaining uninterrupted command and control of the elements in the battalion order of battle and interacting subunits.

We will assume that the MSB is part of a motorized rifle brigade [MSBr], and that it will have to switch from one type of battle to another in a short time in the course of combat operations. On defense, for example, to attack an enemy who has penetrated; on the offensive, to repel his counterattacks; or, on the move, to enter into a meeting engagement. Both the organic communications gear of the subunit and the radio gear of the armored vehicles of the companies and platoons of the battalion will be used in order to provide radio communications.

The MSB will in some cases (in particular, when operating as a tactical airborne assault, in mountains, on swampy terrain and the like) be performing a combat mission without heavy weaponry and vehicles. Radio communications in that case will have to be organized using only the organic, portable sets.

Radio communications must consequently be planned in advance in such a way that they can satisfy to the maximum extent the requirements for command and control, and so that their arrangement would not require great changes under any conditions of the combat situation. Experience shows that the principal means of organizing radio communications is the radio net, and the type of operation is open telephone communications using coded topographical maps, pre-arranged message codes and tables of call signs for officers. One such variation is shown in the figure.

We will consider that the command and staff vehicles (R-14 BM or BMP-1KSh) of the battalion commander, the chief of staff (BTR-80K or BMP-1K), commander of the reconnaissance platoon (BRM-1K) and two BMP-1

vehicles (or BTR-80s) of the communications platoon are deployed at the battalion command and observation post [KNP]. The KShM [command and staff vehicles] of the commanders of attached and supporting artillery, air-defense, tank, combat-engineer and flamethrower subunits can also be located there. The presence of a forward air controller (AN) with an R-853 (R-859, R-809) radio set also cannot be ruled out. The communications operators also set up the radio set of the deputy commander of the MSB for weaponry at the technical observation post, which is located, as a rule, not far from the KNP.

Radio Communications With the Higher-Echelon Commander and Staff

These are organized by communications order of the MSBr staff, and are better supported by the manpower and resources of the brigade and the battalion.

It is desirable to provide communications for the MSB commander with the MSBr commander on two radio nets using the shortwave and ultra-shortwave bands in open and secure modes. The entry of the battalion commander's SW set into the duty radio net of the staff through the chain of command should be envisaged in case of the loss of communications.

The USW radio set in the BMP-1K should be hooked into the radio net of the brigade staff in order to maintain communications with the MSBr staff when the battalion is operating in armored vehicles. If the personnel are fighting on foot, communications with the higher commander and staff must be accomplished with the aid of a portable USW set.

In a case where the MSB is the forward detachment, a tactical airborne assault or an anti-assault reserve, the communications of the battalion commander with the corresponding commander and staff must be organized via linking radio sets in various bands into their radio nets. If the battalion is operating as a TVD [tactical airborne landing force], it would also not be bad to have communications with the higher commander on a separate USW or SW radio net.

It would seem expedient for the commander of the reconnaissance platoon of the MSB, in the interests of obtaining the necessary information, to provide for operations in the SW net of the MSBr reconnaissance chief, as well as for the commanders of the mortar battery and antitank platoons of the battalion and the attached artillery subunits—in USW—in the net of the chief of brigade artillery. Data on the weather situation can also be received there. Radio communications of the commander of the air-defense subunit with the PVO [air-defense] chief of the MSBr would best be organized on his USW net.

If the commanders of the RV [reconnaissance platoon], mortar battery and ZRV [SAM platoon] are right at the

Fig. 1. Organization of radio communications in a motorized rifle battalion (variation).

Key:

1. MSB KNP [command and observation post];
2. MSBr;
3. Commanders of MSB, tank battalion [TB], army corps;
4. Commanders of MSB, tank brigade;
5. Commanders of MSB, march and halt security, traffic service, reconnaissance detachments;
6. Staffs of MSB, TB;
7. Commanders of reconnaissance platoons, commander of reconnaissance company;
8. Commanders of self-propelled artillery battalion, armored artillery group, antitank reserve; commanders of antitank guns, mortar batteries;
9. Commanders of SAM platoons, SAM battalions, AA battalion;
10. Commanders of MSB, TB and MSBr logistical support platoons and companies;
11. MSB and TB deputy commanders for weaponry, combat-engineer battalion, repair and salvage troops, disabled vehicle assembly point;
12. MSB march commander (KUM), traffic control post commanders;
13. Logistical support platoon;
14. Technical support platoon;
15. Medical platoon;
16. Technical observation posts;
17. BMP-1KSh of MSB commander;
18. BRM-1K of reconnaissance platoon;
19. Deputy commander for weaponry;
20. Mortar battery commander;
21. Forward air controller;
22. Radio net for command and control of aircraft and combat helicopters;
23. Radio net for target designation and guidance; 24. Reserve BMP-1 of communications platoon;
25. MSB BMP-1K-NSh;
26. BMP-1 of communications platoon;
27. Radio net of army corps staff (duty);
28. Radio net of MSBr commander;
29. Radio net of MSBr staff;
30. Radio net of MSBr reconnaissance;
31. Radio net of MSBr artillery chief;
32. Radio net of MSBr air-defense chief;
33. Radio net of MSBr deputy commander for rear support;
34. Radio net of MSBr deputy commander for weaponry;
35. Radio net of MSBr traffic-control service;
36. Radio net of MSB commander;
37. Radio net of MSB rear and technical support;
38. Radio net of mortar battery commander;
39. Radio net of reconnaissance platoon commander;
40. Radio net of antitank platoon;
41. Radio net of SAM platoon;
42. Radio net of attached tanks;
43. Radio net of commander of 1st MRC [motorized-rifle company];
44. Radio net of commander of 2nd MRC;
45. Radio net of commander of 3rd MRC;
46. Fire director ;
47. Tank company;
48. Motorized-rifle platoon;
49. Tank platoon;
50. Armored groups, ambush parties;
51. Forward observation post (flank observation post);
52. Mortar platoon;
53. ARV [armored reconnaissance vehicle];
54. IFV [infantry fighting vehicle];
55. Line of tanks;
56. SAM platoon;
57. Antitank platoon;
58. Reconnaissance platoon;
59. Mortar battery ;
60. Motorized-rifle company

MSB KNP, the battalion commander has the opportunity to obtain an alternative communications link with the brigade commander through the radio nets that include those subunits.

The operation of radio sets for the deputy commanders of the MSB for rear support and weaponry in the USW nets of the corresponding higher commanders should clearly be envisaged for the prompt resolution of issues.

Furthermore, a radio net for the traffic-control service of the brigade using the USW-band sets is created to control the advance of battalion subunits to take up sections of the defense or to the final coordination line. The set of the MSB commander should also be linked into it.

Radio Communications With Subordinate, Attached and Supporting Subunits

The command and control of battalion subunits is best planned on three radio nets using R-111, R-123, R-159 and R-158 sets.

The first net is the battalion commander (R-111 and R-123 sets are used when operating from an armored vehicle, and R-158 and R-159 sets in combined use). The sets of the commander and chief of staff of the MSB and the MSR [motorized rifle companies], PTV [antitank platoon], ZRV [SAM platoon] and communications platoon commanders should be operating on it. The sets of the commanders of the mortar batteries and reconnaissance platoon should also be linked to it when their command posts are apart from the MSB KNP. There

could be 7-10 operators on the net in all. This composition of the radio net allows the battalion commander to have stable command and control of all elements of the order of battle, providing for close coordination among them in the course of battle.

It must be noted that a switch to operations on the net using portable radio gear should be made when the enemy creates jamming and when it is not possible to maintain communications using the sets installed in the IFVs and APCs. A different frequency should of course also be used.

The second is also a radio net of the battalion commander, but now uniting the sets of the commander, the chief of staff of the MSB and the commanders of the MSRs, armored groups and ambush parties. It could include the deputy commander of the MSB for weaponry, reconnaissance (combat reconnaissance) patrols, security elements, detachments to eliminate the consequences of enemy use of weapons of mass destruction, traffic support, obstacle clearance and other temporary forces. The work of the commanders of attached artillery, tank, air-defense, combat-engineer and flamethrower subunits should also be provided for here. The total number of operators is large—at 20-22. But there is still no other way out.

And, finally, communications with the subunits of rear and technical support are organized on a special net. The main set here is that of the chief of staff located at the KNP. The radio net would expediently include the sets of the deputy battalion commander for weaponry (at the technical observation point), the commanders of the VMO (logistical support platoon), VTO (technical support platoon) and MedV (medical platoon), as well as the armored vehicles intended for the recovery of damaged vehicles. The sets of the MSB combat subunits can also be involved in resolving issues of removing the wounded from the battlefield and bringing up ammunition.

This last radio net is not created when the battalion is operating without heavy weaponry and vehicles. The sets of the commanders for VMO, VTO and MedV are in that case included in the second radio net of the MSB commander.

The organization of the given three radio nets in the battalion, as can be seen, increases the stability of communications and provides the necessary traffic capacity for the transmission of information among elements of its order of battle. The fact that cooperation issues can be resolved promptly therein is also of no small importance.

In a case where the quantity of radio gear in the MSB is limited, the communications of the battalion commander with all subunits will have to be maintained on a single radio net using UHF-band sets. This option is also applicable when on the move.

The supervision of an attached tank company is best accomplished by means of including the R-123 sets of

the commander and chief of staff of the battalion in the radio net of the commander of that subunit.

If the MSB is being supported by an artillery battalion, their commanders will interact either personally (when the command posts are located together) or on the radio nets of the ADN (artillery battalion) and TR (transport company) commanders.

Communications with air power must be provided for through a forward air controller. He was usually at the KNP of the MSB with a portable radio set, as was shown by the experience of combat operations in Afghanistan, and operated on radio nets for the command and control of aircraft and combat helicopters, as well as target designation and vectoring.

Radio Communications for Coordination

It is well known that one of the chief conditions for the successful fulfillment of combat missions by the battalion is the clear-cut organization of coordination. Special radio nets to support it in the MSB cannot be created, however, since additional sets are required for that. But there is a way out all the same—the exchange of information among elements of the order of battle is accomplished via the mutual entry into the corresponding nets; on the radio net of the battalion commander, for example, but with the permission of the main station.

This issue can also be resolved through personal interaction. This is possible when the commanders of a motorized rifle company and an artillery battery are located at the same command and control post etc.

The method of mutual entry into the needed nets should thus be widely employed in order to provide for reliable coordination in the battalion and its subunits. True, under one inalienable condition—that the communications chief of the MSB must think about this issue in advance and give the corresponding commanders the necessary radio operating data.

Radio Communications in the Battalion Subunits

Radio nets among the corresponding commanders are organized to support command and control in the companies, mortar battery and detached platoons. The manpower and resources of the communications platoon, as well as the subunits, are used here.

Radio communications in each motorized rifle company are provided with the commanders of platoons, armored groups and ambush parties on radio nets using R-158 and R-123 sets. The command and control of crews of infantry fighting vehicles, which will be supported by the fire of the dismounted motorized riflemen, are accomplished on it.

Two radio nets should expediently be provided in the interests of the mortar battery. The first is for communications with the senior officer at the firing positions.

and the forward (or flank) observation posts. The portable R-159 sets of the platoon for the command and control of the mortar battery are used here.

The second radio net is intended for the command and control of the mortar battery. Its composition includes the R-159 of the senior officer and the set of the mortar platoon commanders.

It can be seen from the diagram that the commander of the mortar battery can where necessary supervise the mortar platoons directly.

Proceeding from the assumption that observation posts will be sent out from the reconnaissance platoon in defense and in preparation for an attack, its commander can be at the KNP of the MSB. A radio net must then be organized for the commander of the reconnaissance platoon (using R-123 and R-158 sets) on which communications are accomplished with the observation posts.

The creation of a special net for the commander of the antitank platoon should be envisaged, on which he will be able to control the operations of the subordinate SPG-9 and antitank missile squads using R-123 and R-158 radios.

The defeat of an airborne target in battle is the task of an air-defense subunit, for example the ZRV [SAM platoon]. It is thus necessary to have a net using R-123, R-147 and R-147P radios, on which the commander will maintain communications with the commanders of subordinate missile teams and anti-aircraft gunners. The latter have R-147P radio receivers. This means they can simultaneously receive commands for the destruction of enemy helicopters and aircraft.

In order to transmit an urgent directive to this or that subunit, for example, the commander and chief of staff of the MSB should have the possibility of linking their set with the appropriate radio nets. This can be accomplished. The chief of communications should only prepare and issue the necessary radio operating data to them ahead of time.

As for the receipt of warning signals of an airborne enemy or radioactive, chemical or biological (bacteriological) contamination, they are transmitted outside precedence order from the brigade staff across all operating radio nets of its commander. The signals received should be passed along immediately to the personnel of subordinate, attached and supporting subunits.

It may be said in conclusion that the reliable command and control of all elements of the order of battle using radio communications may be ensured not only through its skillful planning, but also through correct protection against enemy jamming. The MSB has all the capabilities for this. They must only be utilized to the full extent.

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AIR, AIR DEFENSE FORCES

Discussion of Specifications of MIG-29K

941.001.004. *Moscow KRASNAYA ZVEZDA in Russian*
26 Nov 93 p.2

[Article by Valentin Rudenko, KRASNAYA ZVEZDA, under rubric "Arsenal" "MIG-29K: From the Deck Into the Sky"]

[Text] The MIG-29K holds a special place in the light fighter family developed in the Design Bureau imeni A. I. Mikoyan. It is intended for basing on Admiral Kuznetsov-Class heavy air-capable ships. In contrast to predecessors well known as combat aircraft for winning air superiority, the ship-based MIG also can perform missions of defending the cruiser against an enemy air raid, giving air support to naval infantry, and destroying various naval targets, including submarines, just as successfully.

"The decision to develop the MIG-29K was made in 1984," relates Sergey Belyasnik, technical director of tests. "Intensive work went on for four years under the direction of Chief Designer Mikhail Romanovich Valdenberg to design, build and finish the new aircraft. Test Pilot Toktar Aubakirov took the aircraft up on 23 July 1988."

But for more than another year the aircraft was "fitted" for the deck or, more precisely, for its analogue at one of the southern airfields, where a ski jump and arresting gear had been installed and there was a special landing system. By the way, even before creation of the MIG-29K, test pilots Aviard Fastovets, Aleksandr Fedotov and Valeriy Menitskiy fulfilled a major test program for determining the technical possibility of landing on a ship and taking off from the deck using the ski jump.

Aubakirov began the count of MIG-29K landings on the deck of an air-capable cruiser on 1 November 1989. An Su-27K fighter successfully landed on the ship a few hours earlier that same day, and an Su-25UTG attack aircraft did so as well following the MIG-29K. By the way, before this not one of our combat fighters had made an airplane-style landing on a ship.

Designwise the MIG-29K resembles the MIG-29M multirole fighter, which KRASNAYA ZVEZDA described in the 20 August 1993 issue. It too is made of aluminum-lithium alloy and essentially is completely all-welded, but these aircraft also have many differences. For example, a navigation system without analogues in domestic practice is installed in the MIG-29K, and this aircraft is fitted with an aerial refueling system as well as an emergency fuel jettison system. The landing gear on it has been reinforced. There is a special hook in the tail for engaging the arresting cable. The MIG-29K wing, which by the way has a larger area than the MIG-29, folds for more compact accommodation aboard ship.

Two RD-33K engines which have an emergency power setting permitting takeoff thrust to be augmented to 9,400 kg(f) are installed in the fighter. The aircraft can make a go-around even at the moment of a landing run on the deck, and if there was hook engagement, then [it can do so] at a speed of 200 km/hr or more. The aircraft is fitted with an escape system, and in case of ejection the pilot is automatically moved away from the body of the ship at a 30° angle. Fortunately, this system has not had to be tested in practice for now. There were no serious accidents or breakdowns of any kind on this aircraft during the test flights.

Principal Performance Characteristics

Crew	1
Normal takeoff weight, kg	17,770
Maximum takeoff weight, kg	22,300
Engine thrust, kg(f)	2x9,400
Service ceiling, m	17,400
Maximum speed, km/hr:	
At ground	1,400
At altitude	2,300
Operational g-load:	
Subsonic	8.5
Supersonic	6
Ferry range, km	3,000
Landing speed, km/hr	240
Speed off ski jump, km/hr	180

Armament: —air-to-air and air-to-surface missiles —up to 500 kg bombs with overall weight up to 9 tonnes —aircraft-laid mines —free-flight rockets —30-mm aircraft cannon

A takeoff from the ship is made from three takeoff positions from distances of 105 and 195 meters. The latter is used in the overload version with an aircraft takeoff weight of over 19 tonnes, depending on climatic conditions. The aircraft has no brake chute.

The MIG-29K has nine suspension points and is capable of effectively employing the full range of our aircraft armament. According to specialists' assessments, it appears to be the leader both in terms of performance as well as combat characteristics compared with its foreign analogue, the F-18 Hornet.

The aircraft turned out well, but its fate ended up difficult. Work under the MIG-29K program was spasmodic due to lack of financing, and presently it has been completely cut back. The aircraft has not flown since August of last year. Everything is heading in a direction where one more program, that of the light deck-based fighter, will be added to the many promising programs essentially buried of late.

Impact of Personnel Shortages on PVO Equipment Maintenance

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in Russian No 7, 1993 pp 46-48

[Article by Major-General Bronislav Porozinskiy, deputy commander for weaponry of a formation, under the rubric: "Maintenance of Hardware and Weaponry": entitled "No End to the Problems"]

[Text] **Background.** Bronislav Antonovich Porozinskiy was born on 15 July 1943. He completed the Zhitomir Military Radiotechnical School, the Minsk Military Engineering Radiotechnical School and the Kharkov VIRT [Military Radiotechnical Engineering Academy of Air Defense]. He has served in various technical positions. He was the deputy commander of a regiment for weaponry, chief of the missile-weaponry service and deputy chief of a large SAM formation. He has been deputy commander for weaponry of a large strategic formation since 1988 and has been awarded the Order of the Red Star.

Old problems have worsened sharply, and new ones have appeared, in ensuring the high-quality maintenance of weaponry and military hardware (VVT) in large units under the conditions of today's economic and political situation in the country. The new ones include first and foremost the understaffing of units with conscript personnel. Many subunits have a shortfall of up to 50% in enlisted men and NCOs. There are many negative elements from this. Two of them are the most important, however, from the standpoint of supporting VVT operation.

First of all, this understaffing forces the use of a significant quantity of officers for work that used to be performed by the enlisted and NCO personnel. This is naturally tearing them away from the fulfillment of their own duties, the tasks of combat training and the upkeep of the VVT in good working order and combat-ready condition. That ultimately leads to a decline in professionalism.

Second, the shortage of people is affecting the quality and increasing the time of servicing. It sometimes even makes performing it impossible altogether, with all of the consequences arising therefrom. Matters have become especially serious with the maintenance of transport, launch, power-supply and materials-handling equipment.

The high turnover of officer cadres adds oil to the fire, as they say. Modern surface-to-air missile systems (ZRS), as is well known, have a high degree of complexity. Quite a bit of time is needed to master them thoroughly. But that is just what the young officers do not have enough of. Why? Let us look into it.

The fact is that almost half of the positions in the ZRV [SAM troops] and RTV [electronic and technical support troops] armed with this highly complex hardware have

the rated job category of "senior lieutenant." A young officer with higher education has the right to attain that rank after a year. In only another year or two, when the young officer is just taking shape as a professional, the commander has to start thinking about moving him to a position with a higher rated job category. In short, the specialist who has just come into his own often has to be replaced by a new one, which involves training and expenses once again.

I think it would be expedient to raise the rated job category of a number of the primary positions by one level. The officer thus has time not only to assimilate the hardware entrusted to him, but also to maintain it professionally for a sufficiently long time without worrying about his career growth in the service. This step would, of course, entail some additional expenses. They will be recouped many times over, however, by the increase in combat readiness and the decrease in the expenses for the maintenance of the VVT itself.

The units are armed with the most contemporary SAM systems today. Analysis and the development and realization of proposals aimed at raising the quality of maintenance and the exchange of work experience have exceptionally great significance in this regard. The results of the operation of VVT in service with the unit, unfortunately, shows that we have still not been able to evaluate reliably all of the maintenance characteristics at the stage of state testing on the proving ground.

Say the combat crews have observations regarding the sufficiency and completeness of ZIP [spare parts, tools and accessories] kits, the quality of the processing and amount of documentation or the convenience and frequency of servicing, among other things (not to mention proposals for improving the maintenance characteristics of the new VVT.) This is possibly connected with the fact that the process of mastering new hardware has not yet been completed. Thus, some specialists do not have confidence in their abilities. There is nothing to fear here, but they must act more boldly. The maintenance of VVT in the process of testing on the proving ground, after all, has its own specific nature and features. They have experimental models of the hardware whose quality of manufacture is superior to series-produced models. They are tested, as a rule, in one (or a few) copies for a brief period of time, which leads to limited statistical material for evaluating the maintenance characteristics. The new hardware is constantly being refined and improved, and that means there is no normal maintenance process.

It is also difficult to test the VVT on the proving ground under diverse of climatic conditions.

It would also not be superfluous to mention that the testing is conducted by high proficiency-rated specialists, who do not always take into account the level of training of the troops when running through the maintenance documentation (ED).

It is difficult to expect, with a regard for all this, that the run-through of questions of maintenance on the proving grounds will fully satisfy us. It is thus very important for the commanders to ascertain shortcomings, react promptly to the results of VVT maintenance and systematically analyze, summarize and submit their proposals to the customer and the chief designers for their realization.

Bringing the formation up to the prescribed strength levels of repair shops and other means of servicing, I am convinced, would also facilitate a rise in the quality of maintenance. We are fighting for that. But we do not always win. Last year we were short 84 repair shops of various types, 81 hydraulic lifts for servicing antennas, 21 electrical-engineering laboratories, etc. Hundreds of batteries have gone through their service lives and need to be replaced, but their planned deliveries have been disrupted. We are running around, looking for solutions, patching holes, but that is not our business, you will agree.

The maintenance of VVT in a combat-ready state is impossible without a well-organized, automated technical support system (STO) that meets not only the requirements of the times, but is also figured for the long term. The STO that exists in the formation has a low level of automation, and many of its components are inefficient, labor-intensive, sluggish, and insufficiently reliable and operative. The task of keeping VVT in good working order is therefore resolved with heavy stress on the manpower, and breakdowns are frequent. And how could it be otherwise, when the technical support for the most modern ZRS and electronic hardware of the RTV is accomplished using functionally and physically obsolete materiel.

The situation is aggravated by the realities of the present day, so well-known to us all. Concrete and encouraging proposals for the development of the STO of the formation were developed and approved by the commander-in-chief of the PVO [Air-Defense] Troops as long as three years ago. Nothing has been fully realized in practice, however, owing both to the lack of sufficient financing and for other reasons.

It has been proposed that the maintenance of VVT in good working order be supported by a three-level system of repairs. At the first level, the manpower of the combat crews of the subunits and units of ZRV and RTV of the formation perform servicing and routine repairs via the replacement of cells, units and assemblies for operating ones from the ZIP maintenance kits using the resources of the ZRS.

Work should be performed at the second for medium-level repairs of faulty standard replaceable elements (TES) by the special repair subunits (or units) of the formation. The support of medium-level repairs of weaponry and military hardware for the ZRV, RTV, communications gears and ASUs [automated control systems] requires a replacement store of spare TES, the

assortment of which coincides with the assortment of ZIP maintenance kits, and sections to repair the failed replaceable elements and the ZIP repair kits in bulk.

The third level is planned (major) overhaul at enterprises of army or central subordination.

The manpower and resources for routine and medium-level repairs constitute the system of field repairs in the formation. I would like to dwell on its problems in more detail. It is in fact primarily routine repairs that are performed in the formation. The manufacturing enterprises are brought in for the repair of VVT and ZIP kits that are under guarantees on the basis of complaints. Enterprises from industry must also be brought in for the repair of VVT not under guarantee in a number of cases. That is accomplished by means of GUZV (Armaments Orders Chief Directorate) contracts with the corresponding enterprises.

Everything goes smoothly only on paper, however. In reality, over the last year, the responsibility of the manufacturing enterprises for the fulfillment of their obligations under complaints has declined sharply. The deadlines for the arrival of plant teams, as well as those for the repair or replenishment of unexpended ZIP kits, are being violated left and right. The Prozhektor PO [Production Association] (Moscow), Utes PO (Moscow), Elektrosignal PO (Voronezh) and the Armelektromash ANPEO (Yerevan) must be singled out among the worst in this regard. The enterprises of sovereign Ukraine do not react to complaints at all. The reason is the lack of ruble monetary resources.

This attitude of the enterprises toward repairing VVT and ZIP kits under guarantees is simple to explain. The enterprises are subject to purely symbolic fines for complaints regarding military products, and demanding them is another whole problem. It is thus more advantageous for the enterprises to consent to the fines rather than engage in restoring the VVT. Matters are even worse with the repair of non-guaranteed VVT and ZIP kits. The GUZV contracts with the enterprises for some reason have no obligations for repair deadlines. They can thus be drawn out as long as they please. It should also be noted that faulty elements and assemblies from non-guaranteed hardware sent to the manufacturers are not repaired by the latter, since they have either been taken out of production or are not subject to repairs. All of this leads to an increased number of cases of idle VVT not in working order owing to the lack of failed elements of all types in the ZIP kits.

The question of involving the Technical Assistance Pilot Enterprise (GTP, Moscow)—with which the GUZV has concluded a contract to assist the formation in the repair of non-guaranteed VVT and ZIP kits—in routine repairs (finding defects) has not yet been resolved. The GTP naturally strives to take on the repair of weaponry that has been assimilated by that enterprise, and for which there is a ZIP kit. This ensures financial advantages for it. We are trying to see

that the GTP repairs all the weapons that we cannot repair using our own resources.

We are taking the following path today. Defects or failures that arise in VVT (if the subunit is not on alert duty) are found and eliminated within a day by the personnel of the battalion or company. If the defect is not found within a day, the technical-engineering personnel of the unit are brought in. The technical-engineering personnel of the formation are included on the third day if necessary. The fourth day is the repair elements of the formation—the officers of the weapons directorate and specialists of the field teams and repair and technical bases. If even that is unsuccessful, representatives of the GTP and the manufacturers are brought in to do the repairs (eliminate the defects).

The time to repair technical defects in a weapon at first glance seem to be lengthened. That is possible. The important thing is that the personnel do not lose their technical skills, but rather improve them, while most of the defects (more than 60 percent) are eliminated in less than two hours. More than 90 percent of the defects are detected and eliminated by the technical-engineering personnel of the units and formations. We are unable to eliminate just 10 percent of the defects without representatives of the GTP and industry. The main reason for that is the lack of ZIP kits and the small number of field teams.

In short, there are quite a few problems in routine repair. Medium-level repair is even worse. The existing elements in the formation are not equipped with the necessary tools, test-bench equipment and ZIP repair systems. The organic equipment does not include repair modules that provide for the repair of the modern hardware of ZRV, RTV, communications gear or ASUs, as well as means of transport... The necessity of organizing medium-level repairs in the units is meanwhile ever increasing. The GTP cannot independently support the repair of non-functioning assemblies and parts, and is thus forced to conclude contracts with other enterprises of the manufacturer of ZRS equipment. And then there are new problems. There are, to my view, two ways out of the unfavorable situation that has taken shape.

The first, as a temporary one, is to see that, while continuing to interact with the GUZV and the GTP on questions of medium-level repairs, the formation is given greater authority to conclude contracts with the enterprises on a one-time, temporary and permanent basis. We need, in other words, the necessary financial resources. There is experience in dealing with the enterprises directly.

The second way out, a fundamental one, is the creation of a modern system of medium-level repairs in the formation.

I would like to say, despite the existing problems, that there are no faulty weapons, aside from motor vehicles (the absence of units and assemblies) in the formation. This has been achieved through the hard work of the technical-engineering personnel of the formation and with the aid of the officers of the GUZV, the workers and engineers of the GPTP and representatives of the manufacturing enterprises.

There is, perhaps, a certain subjectivism in the assessment of the engineering work here. But I would like very much that this category of officers have opportunities equal to others to receive awards, positions, ranks. Their contribution to combat readiness is quite substantial.

I will say the following in conclusion. There are and will be problems and difficulties. They are being partly resolved and will be resolved, I am sure of that. Officer engineers who love their profession and always fulfill their duty honestly and conscientiously, maintain the weaponry and military hardware in good working order and prepare themselves in worthy fashion are not becoming extinct in the PVO troops.

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Electromagnetic Radiation as Weapon

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[Article by Aleksandr Borisovich Prishchepenko and Colonel Vladimir Petrovich Zhitnikov under the rubric "In the World of Science": "EMO [Electromagnetic Weapons] in PVO—Some Questions of the Use of Electromagnetic Emissions in the Radio-Frequency Band as a Weapon"]

[Text] Aleksandr Borisovich Prishchepenko was born in Moscow in 1948. He completed the Moscow Physical Engineering Institute. He is an experimental physicist. He has worked at research organizations in the defense complex, including on the creation of neutron generators for nuclear weapons. He is the originator of more than a hundred inventions. He is currently the supervisor of a research laboratory for the creation of special-purpose weapons.

Colonel Vladimir Petrovich Zhitnikov was born in 1948. He completed the Moscow Aviation Institute and the VAA imeni Kalinin. He has worked at a research institute of the Ministry of Defense, and later at a military mission. He is currently deputy chief of the PVO Directorate of the Ground Forces GRAU.

The combat operations in the Persian Gulf are still the subject of analysis by specialists. Quite a few high-precision weapons systems were tried out in battle there. The outlines of that conflict could be typical of a number of other contemporary wars as well. Those wars will evidently be typified by the precise proportioning of a combat impact that is formulated in advance by the military-political leadership.

The quality of PVO [air-defense] support of one's own troops in a conflict with the use of high-precision weaponry has a decisive effect on the outcome of the battle. The PVO resources should cover the troops against small, high-speed and maneuverable weapons platforms in a rapidly changing situation and in the face of enemy EW [electronic warfare]. The complexity of support under those conditions and the strike accuracy necessary for the efficient destruction of a target using firepower lead to a substantial rise in the cost of production and maintenance of PVO systems.

Powerful radio-frequency electromagnetic emissions (RChEMI), emitted at a target that includes electronic gear made of semiconductors, creates powerful current pulses in the electrical circuitry of the target, disabling the semiconductors.

The outlook for the use of these radio-frequency electromagnetic emissions (RChEMI) as a destructive factor, expending less energy to disable semiconductor elements than any mechanical influences on the target, is thus important in our opinion.

RChEMI as a Destructive Factor

Experiments have shown that very little energy is required to disable semiconductors. Before reaching them, however, the RChEMI pass through the SHF path of the target, where they are weakened substantially. Neglect of this fact leads to markedly reduced destructive criteria.

Field practices have shown that the value of the safe distance between the same types of radars with emitter power in the tens of kilowatts is on the order of a hundred meters. The radar will thus remain guaranteed to be operable at distances of hundreds of times more (tens of kilometers) even if the corresponding power is increased exponentially (hundreds of megawatts).

The euphoria that was initially observed on the score of the combat capabilities of EMO [electromagnetic weapons] thus does not have sufficient grounds.

We will consider briefly the process of interaction of the RChEMI with the target. The training of considerable EMF [electromotive forces]—which are the cause of the functional disruption—onto the housing of the electronic gear (RES), as a rule metallic, is typical of waves a meter or more in length. Various elements of the electronic circuitry, as well as actuators, fail in that case. Random actuation could also occur.

Shorter waves—decimeter and centimeter—are comparable in length to the operating waves of most RES. The input devices (SHF-diode mixers, for example) are damaged under exposure from them. The impact, however, depends strongly on the orientation of the directivity pattern (DN) of the RES relative to the source. Even small deviations from the major lobe lead to a sharp increase in the destructive values of the power flux density of the RChEMI. When the differences in the wavelengths are increased, the DN of RES reception of

out-of-band emissions "is smoothed out" and the effects of directivity become minimal. Millimeter waves penetrate through slots in protective screens, servicing hatches etc. The input circuitry and even the screening circuitry of internal digital signals processing machinery (BTsVM) are damaged therein.

A trustworthy computational model of the effects of powerful REMI [as published] on RES has not yet been created. An experiment is thus needed in order to obtain quantitative information on the levels of exposure of targets to RChEMI.

Analysis of the results shows that the threshold values for the power flux density of RChEMI inflicting functional damage on various types of RES is from thousands to millions of watts per square meter in a case of exposure to out-of-band emissions. The effects on the same types of objects by RChEMI of identical spectral composition had to be observed. Different values for the power flux density led to random actuation, retargeting, temporary functional failure and disabling, i.e. the defeat was of a comprehensive nature. Modern items are especially vulnerable. This can be explained by the fact that the extent of integration of semiconductors in them is higher and, thus, the dimensions of the active elements and their resistance to shock current overloads are less. If EMO are to have a place in the arsenal of means of warfare, the development of a parametric series of protective devices and their installation will be required not only on input circuitry, but in other circuit assemblies as well.

The use of out-of-band emissions reduces the effectiveness of protective elements. The thresholds and actuation times (up to 10^{-7} seconds) of gas-filled arresters are increased in particular.

The targets in the experiments were also subjected to exposure to RChEMI with a wavelength equal to the operating one. The threshold values of the destructive power flux density were reduced by 20—70 times in that case, but only when the emissions were made within the limits of the major lobe (DN) of the target directivity pattern. If that condition was not observed, the power flux density necessary for defeat was higher than the corresponding values for the out-of-band RChEMI obtained under analogous conditions of the experiment.

We would note that the duration of the exposure of the RES to RChEMI is also substantial. Fig. 1 shows the dependence of power efficiency in the temporary emission mode. It is clear that the thermal impact on the *p-n* junction will be the greater, the less the role of thermal draw-off—i.e. the shorter the current pulse—with identical applied energy. An efficiency of a hypothetical load mode was used in the calculations for 1 under which the time of release of heat at the *p-n* junction was infinitely small, while the heating energy at the *p-n* junction was finite. It can be seen from the accompanying graph that in order to heat a *p-n* junction of silicon to one and the same temperature (to 1,200°K, for instance, which corresponds to its complete degradation), the current pulse induced by an emission of 100 ns [nanoseconds] should have a power almost double that of a pulse with a duration of 10 ns.

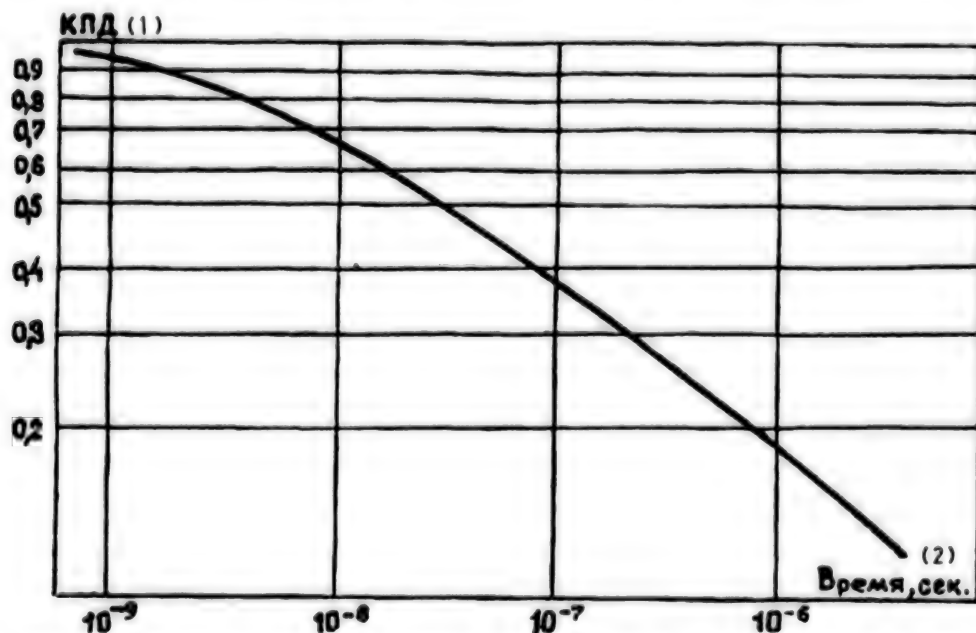


Fig. 1. Dependence of Power Efficiency of Emission Mode on Time of Target Exposure to RChEMI Flow.

Key:

1. Efficiency.
2. Time, seconds.

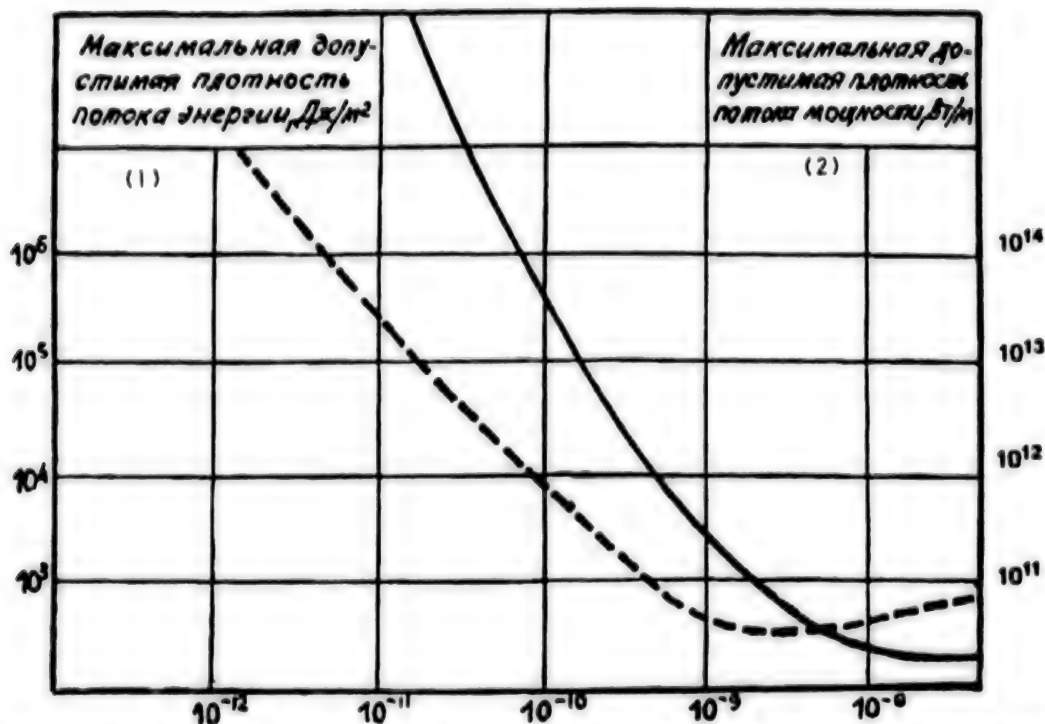


Fig. 2. Dependence of maximum allowable power flux density (solid line) and density of energy flux (dashed line) on duration of RChEMI power flux in air at pressure of one atmosphere.

Key:

1. Maximum allowable power flux density, J/m²
2. Maximum allowable power flux density, W/meter

The graph shown indicates the threshold energy values that are minimally necessary for RChEMI effects on RES, as well as the lower limits of the aggregate of parameters at which the RChEMI also represents a destructive factor. This aggregate, however, is also limited upward. RChEMI that have left a source (in which the possibility nonetheless exists of increasing electrical strength through the use of effective insulators) disseminate into an environment whose electrical strength is limited. The maximum value of the power flux density (P_{pr}) that has not yet elicited a breakdown from the medium (the air) represents the upper limitation acting on the external boundary of the source. If that value is exceeded, a breakdown occurs and the energy of the RChEMI will be expended for the useless heating of the plasma surrounding the source. The values for the penetration densities of the RChEMI power flux are presented in Fig. 2.

If it is taken into account that the density of the power flux lessens in direct proportion to the square of the distance

from the center of the emissions field of the source, it is not difficult to link the typical size of the emissions source (γ) with the maximum lethal distance (R):

$$R \approx \gamma \sqrt{\frac{P_{pr}(1)}{P_{por}(2)}} \quad (1)$$

Key:

1. P_{pr}
2. P_{por}

where P_{por} is the minimum value for the density of the power flux striking the given target.

If the characteristics of the emissions generated by some source are far from the penetrating values, formula (1) can also be used to get a value for the lethal distance. In that case the measured value of the power flux density is used instead of P_{pr} , while the distance from the center of the emissions field in which the measurements are being made is used instead of γ .

Substituting the values of the parameters in formula (1), we obtain:

the maximum range for the defeat of RES exceeds the typical size of an emitter source by a hundred times in the best case when employing electromagnetic weapons under normal conditions of atmospheric pressure.

We would note that this criterion is valid outside of any dependence on whether the emissions have scattered or have been gathered into a narrow beam. If a source is created with small dimensions that forms very powerful RChEMI, then the ballast layer of insulation around it will have to be augmented in order for the RChEMI power flux density not to exceed the penetrating value when they reach its surface. **The power of the source is thus connected with its dimensions, and that means with its mobility.**

How Can Electromagnetic Weaponry Be Created?

The creation of EMO is possible on the basis of powerful emitters of traditional vacuum high-current electronics (gyrotrons, magnetotrons, Cerenkov generators etc.). A concentration of emitted energy with a small, solid angle and low (10%) scattering of frequencies in the spectrum of the RChEMI formed are typical of them. A very narrow beam of RChEMI, in which the power flux density considerably surpasses the penetrating, could "pass" through a plasmoid created by it. The beam "sharpens" even more therein, but at the price of substantial losses of energy in the formation and heating of the plasma. This phenomenon is moreover observed only for comparatively long (microsecond), and thus ineffective (see Fig. 1), RChEMI pulses.

The electronic emissions require considerable (up to units of megavolts) operating voltages. But the electrical strength of the design must also be ensured, and that leads to an increase in the dimensions and a reduction in the unit characteristics. The RChEMI power draw is 5×10^{-5} J/cm². Traditional emitters permit repeated actuation.

Sources in which the formation of RChEMI occurs through the compression of a magnetic field have greater unit power. These include a shock-wave emitter, an explosive-magnetic frequency generator and a superconducting magnetic-field shock-wave shaper, which make it possible to obtain a RChEMI power draw of 10^{-2} J/cm². The isotropic distribution of the RChEMI flux formed in space and the broad (several groups of ten) frequency range of the RChEMI formed are typical of them.

Power supply is accomplished through high-current (hundreds of kA) pulses at low (tens of kV) voltages.

As we see, the emitting, dimensional and operational characteristics of the sources in various classes differ markedly. This means that the conceptual foundations of the weapons systems created on the basis of them will differ as well. The large dimensions and directed nature of the emissions of traditional generators conditions the creation of directional sources (NI) based of them, which

should be supplied with a guidance system. The isotropic nature of the emissions and small dimensions of sources based on the compression of a magnetic field makes it possible to fit them to existing types of platforms and use the flux of the RChEMI created to compensate for the inaccuracy of the platform. That use makes it possible to consider these sources as the foundations for the creation of electromagnetic ordnance (EMBP).

Application: Two Concepts

The use of EMO in an actual combat situation will sometimes be ineffective. An antiship missile that continues to fly with a disabled homing head (GSN) at a distance from the target of about one kilometer with an undamaged airframe, engine, warhead and impact detonator will defeat a ship all the same. If the homing head is disabled at a distance of three to five kilometers, errors in homing accumulate and the likelihood of hitting the ship becomes acceptably low. **The RChEMI strike only the RES, and the combat impact from the application of EMO is thus manifested the more fully, the more important the role of RES in a given situation.**

RES plays the most important role in long-range battles, as well as in the most maneuverable types of close-range battle with a target at top speeds. We will consider rival solutions connected with the utilization of weapons assets and EMO.

For tasks that require the directional distribution of the energy of the destructive element, values obtained from formula (1) say that the maximum lethal range was one kilometer in the use of a source of out-of-band RChEMI with a typical size of about one meter when used under atmospheric conditions. This is less than the range of effective engagement of the ZSU-23-4 with roughly the same barrel length. The range of target defeat is increased only a little (by 3—7 times) in a case where the frequency of the RChEMI is equal to the operating one. But this increase is obtained at an exceedingly high price. An increased range can be attained only in a case where the emitter is located within the confines of the major lobe of the directivity pattern (DN) of the target. The homing head of a guided missile (GSN UR), for instance, cannot be defeated in the lock-on mode if the directional source (NI) is located "to the side" of the trajectory of the guided missile (UR). It is also not clear how to determine the operating frequency of a target with passive homing. If it is necessary to protect one's own radars, adherents of NI usually point out that antiradar missiles will be set to its operating frequency. That is a very weak argument—a radar attack is possible by missiles using other homing principles as well.

If a directional source is used to protect a target, it should be located close to the target in order to be within the confines of the major lobe of the directivity pattern of the attacking weapon. Since the NI requires homing, the solution of the problem of electromagnetic compatibility is also required. If the source defeats enemy RES at a great distance, it destroys it or temporarily "blinds"

it along with its own RES through the side lobes of the emissions DN. The creation of an emitter without DN side lobes is theoretically impossible.

Assessments taking into account such factors as mobility, effectiveness of engagement and universality of application provide no grounds to draw conclusions regarding any substantial advantages of NI over conventional firepower, in any case if the combat operation take place under atmospheric conditions. It should also be noted that the ranges cited for the engagement of RES with the aid of NI are just an estimate, and by the time this article was written the possibility of an NI defeating full-scale targets even at distances of hundreds of meters had not been demonstrated in practice.

The outlook is more favorable for tasks requiring the isotropic distribution of the destructive element. While a 122mm fragmentation/high-explosive shell can reliably destroy a proximity mine when it is no more than 4—5 meters from it, a mock-up of EMBP of the same dimensions, the testing showed, does this within a radius an order of magnitude greater. This conforms to the estimates used in formula (1), according to which maximum effective ranges of 60 meters can be achieved with a typical size (in this case, radius) of the source of six centimeters.

The EMBP thus possesses considerably greater capabilities to compensate for the inaccuracy of the platform than ordnance that destroys a target by a percussion wave and fragments.

The appearance of cumbersome directional sources moreover makes it possible for enemy reconnaissance to detect them and conceal the intent of the operation. The fitting of platforms that are always present in the area of combat operations (rockets, for instance), would at the same time effectively not be subject to detection. The task of fighting dispersed targets (with adjustable cluster submunitions deployed in the order of battle) is exceedingly important. The more the RChEMI is in a beam, the more difficult it is to fight targets using an NI. Salvo fire is possible for EMBP, with the exposure of the $p-n$ junctions in this case to a sequence of current pulses induced by actuation of EMBP screens provides a super-cumulative effect compared to a solitary pulse.

A minimal energy density of the RChEMI acting on the target is typical for an NI at maximum range. The maximum range for EMBP is limited only by the capabilities of the platform, while compensation for the inaccuracy of the platform and an increase in the effects on the target are possible through increasing the number of pieces of ordnance in the salvo.

The cost of just one consumable element of an NI of an explosive-magnetic generator is virtually equal to the cost of an EMBP.

The presence of a significant quantity (up to $\frac{1}{4}$ of the volume) of explosive in EMBP makes it possible to use them for direct fire on the target as well.

An analysis of the properties of electromagnetic emissions in the radio-frequency band makes it possible to consider them an effective destructive factor when operating against targets that include RES. The maximum effectiveness is achieved for tasks that require the isotropic distribution of the RChEMI.

The use of electromagnetic ordnance will make it possible to reduce the cost of weapons systems through reductions in the requirements for accuracy of the delivery of that ordnance.

From the editors: Information appeared in open features in the United States on superpowerful sources of RChEMI while this material was being prepared for publication. The military applications of such sources are being considered, even though they weigh dozens of tons, while the nominal effective range is about ten kilometers. The virtually zero mobility, in the view of the authors, is not the sole cause for doubt in their combat value; the homing system of such NIs becomes a priority target for enemy EW assets. These conceptual questions are still not finding convincing answers among the advocates of creating a system of NIs dispersed in space and synchronously trained on the target.

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NAVAL FORCES

Kiev 'Robbery' Hurts Strapped Black Sea Fleet

PM2311162593 Moscow KRASNAYA ZVEZDA
in Russian 23 Nov 93 p 2

[Interview with Colonel Aleksandr Zhukov, chief of the Black Sea Fleet Financial Service, by Igor Kondratyev and Vladimir Pasyakin under the "Topical Theme" rubric; place and date not given: "How Many Times Can the Black Sea Fleet Be Exploited?"]

[Text] KRASNAYA ZVEZDA has already raised questions concerning the financing of the Black Sea Fleet in its pages many times. The situation has changed in many respects since then, and indeed not for the better. Colonel Aleksandr Zhukov, chief of the Black Sea Fleet Financial Service, speaks of the true situation and current problems in this sphere.

[KRASNAYA ZVEZDA] Aleksandr Vladimirovich, could you name the specific sums which the Black Sea Fleet has received this year from the Russian Federation and Ukrainian Ministries of Defense?

[Zhukov] As of 15 October of this year credits to the tune of almost 90 billion karbovantsi had been received, with Russia providing three-fourths of this sum. In recent months, the relative size of the credits allocated by Ukraine to the Fleet has decreased significantly. Thus, whereas over 20 billion karbovantsi was provided by Russia in August, Ukraine only gave 2 billion. In October no funds came from Ukraine at all.

[KRASNAYA ZVEZDA] Why?

[Zhukov] I cannot answer this question because it lies within the competence of the Ukrainian Government and Defense Ministry. I will only say that the last

application we made to the financial-economic directorate of the Ukrainian Ministry of Defense for 10 billion karbovantsi was 10 September of this year. We have received no answer.

[KRASNAYA ZVEZDA] Is it true that the Black Sea Fleet is allocating a lot of money for the maintenance of Ukrainian servicemen and military formations?

[Zhukov] Yes, and what is more, the sums involved are really striking. So as not to make unsubstantiated claims, I will cite specific examples. In the first nine months of this year, 26 Ukrainian military units were allocated food worth more than 2.5 billion karbovantsi free of charge, and that should be stressed.

The pay of servicemen on the draft who were called up from Ukrainian territory, are performing service in the Black Sea Fleet and have sworn the oath to Ukraine, was around 500 million karbovantsi in September of this year. All forms of provision for these servicemen (food, kit, social amenities, expenditure for training, and so on) are in fact carried out at Russia's expense. Summing up the aforesaid, you cannot ignore the following important aspect either. Around half of what Ukraine is allocating to the "common stock," it would seem, ends up supplementing its own budget, while the Black Sea Fleet is in a difficult position: It has nothing with which to pay servicemen's pay and the wages of workers and employees, and for financing other needs.

[KRASNAYA ZVEZDA] Many people are interested in the correlation of funds allocated by the two Navies for major construction work.

[Zhukov] The correlation is as follows: The Black Sea Fleet has allocated 12.1697 billion karbovantsi (including the money for fuel given to the construction directorate) for the major construction of housing and social facilities this year, while the Ukrainian Navy has allocated 5.965 billion karbovantsi.

[KRASNAYA ZVEZDA] As we know, tax and customs services are now actively in operation. What does their activity cost the Fleet?

[Zhukov] The tax and customs inspectorates, as well as other Ukrainian administrative organs, are exacting sizable sums, which significantly increase Russia's expenditure on maintaining the fleet and are not recompensed by Ukraine at all. The total taxation look like this: Over 5 billion karbovantsi has already been paid for land, and, given the upcoming payment for the second half of the year, the overall sum will be approximately 13 billion. The size of the customs duty levied on food imported into the territory of Ukraine is almost 10 million karbovantsi, kit—5 million, fuel—over 20 million, and automobile transportation property—around 1 million karbovantsi.

Incidentally, there is another inspectorate—the quarantine inspectorate. Its workers have already exacted almost 4 million karbovantsi for checking food brought

into Ukraine's territory. Apart from that, the Fleet pays for various road taxes. As of today these have exceeded 13 million karbovantsi. Railroad services and the maintenance of roads on Ukraine's territory have also cost a lot. All things considered, someone obviously thinks that the Fleet can be exploited once again...

[KRASNAYA ZVEZDA] And after all, there is also air transportation. And that also requires expenditure...

[Zhukov] Pretty stiff expenditure, what is more. For every flight from Russia's territory to the Black Sea Fleet, Ukraine exacts \$10 or the same sum in karbovantsi at the bank exchange rate. Apart from that, an obligatory customs examination has been introduced. So, \$5 is exacted for every customs worker who arrives to examine an airplane. But if the flight is on a weekend or a holiday, the rates are doubled.

[KRASNAYA ZVEZDA] And how much does it cost approximately for an officer and his family to transfer from the Northern Fleet, for example, to the Black Sea Fleet? Until recently such a transfer generated no problems.

[Zhukov] It does now. It costs officers and warrant officers who arrive to continue their service in the Black Sea Fleet from the territory of Russia 300,000 karbovantsi for the customs examination of containers of their home contents alone. As a result, these examinations cost a pretty penny, not just for those who are transferring to us, but also for the Fleet's Financial Service, which is obliged to recompense the serviceman for the expenditure he has borne.

[KRASNAYA ZVEZDA] The last question, Aleksandr Vladimirovich: Have we examined all the expenditure, and can we say that that is it, so to speak?

[Zhukov] No, we must not be in a hurry to do that. Apart from the expenses that have been listed earlier, there is a multitude of others, smaller taxes, customs, and payments, which it is impossible to take into consideration effectively. The definitive sums will become known following analysis of the annual reports of large units and units.

[KRASNAYA ZVEZDA] Not long ago both Russia and Ukraine had equal claims in the Black Sea Fleet. After Massandra, when the Russian president expressed his readiness to take the entire fleet under Russian jurisdiction and take responsibility for provisioning (including financial support), Ukraine initially reacted with violent disagreement. Now, it seems, it has accepted this option, because in the face of the complete collapse of the economy, it is not in a position to maintain even half of the Black Sea Fleet. Furthermore, it has imposed taxes and exorbitant customs duties on the fleet. It is hard to assess this as anything other than shameless robbery of the Fleet.

Pacific Fleet's Tasks, Problems Examined

*PM2511134593 Moscow KRASNAYA ZVEZDA
in Russian 25 Nov 93 p 2*

[Interview with Pacific Fleet Commander Admiral Georgiy Gurinov by Vladimir Maryukha under the "Opinions, Judgments, and Proposals" rubric; place and date not given: "All Other Things Being Equal: Despite the Economic Difficulties, it is Necessary To Preserve the Basis and Might of the Russian Fleets, According to Pacific Fleet Commander Admiral Georgiy Gurinov"—first paragraph is introduction]

[Text] Georgiy Nikolayevich Gurinov took up command of the Pacific Fleet in April, exchanging the office of deputy commander in chief of the Navy for a stressful post far away from Moscow. He joined at what was not the best time for the Fleet, which is firmly anchored at the bottom of the "Ranking Table of the Russian Navy." However, Admiral Gurinov, who graduated from the Caspian Higher Naval School in 1960, has never run away from difficulties. He has served successively in all the posts from senior assistant commander, commander of a destroyer, chief of staff of a brigade of guided-missile ships, brigade commander, chief of staff of a division of guided-missile ships in the Baltic, and first deputy and commander of a large strategic formation of ships in the Pacific Fleet to chief of staff and first deputy commander of the Black Sea Fleet. He is a graduate of the Naval Academy and the Armed Forces General Staff Academy. And in under a year in his latest post he has made striking changes to the Pacific Fleet's appearance.

[Maryukha] Georgiy Nikolayevich, our swift-moving times have changed not just the fleet which you command but the tasks which it faces. No one describes Russia's new partners in the Far East region as potential adversaries any longer. And, given that, could the Fleet in both its past and present shape be simply redundant?

[Gurinov] The Pacific Fleet's tasks have indeed changed and they are now purely defensive in nature. The active phase of Fleet operations in the Far East zone has been virtually completely eliminated save for participation in international forces in the Persian Gulf and joint exercises. Despite all the economic difficulties, we have managed to maintain the Pacific Fleet's effective combat strength. The Fleet is therefore coping perfectly successfully with its new tasks. As far as our partners-cum-rivals are concerned, today we do not talk about the "brutal face of imperialism" as we did before. Communication and contacts with foreign fleets in the Pacific Fleet's zone of responsibility are improving. For our part, we have drastically reduced the number of major exercises involving large forces. However, no such trend is observable on the part of our former potential adversaries. Even on the eve of President Yeltsin's visit to Japan, the U.S. and Japanese Navies did not deem it necessary to call off their major joint exercises. Moreover, virtually all our reconnaissance operations in the coastal zone end with our detecting foreign submarines.

The political situation in the region remains difficult. There is above all the problem of conflict between North and South Korea, where it is extremely difficult to forecast the development of events because of the DPRK's hard-line stance. At the same time the U.S. Navy reacts very quickly to any fluctuations in the political barometer and is building up its forces all the time. Many contentious issues are being tackled here precisely by strong-arm pressure, which was not previously to be observed in the region.

[Maryukha] In other words, your sincerity here, on Russia's Far Eastern borders, is interpreted as weakness, particularly as both the economic situation in the state and the losses which the Pacific Fleet has suffered, certainly not as the result of sea battles...are conducive to such a conclusion.

[Gurinov] For all the gravity of the economic problems, Russia must preserve the basis and the combat might of its fleets, primarily the Northern and Pacific Fleets.

Yes, we have lost aircraft-carrying ships owing to the lack of a maintenance facility. But its formation is already under way today. However, the range of our current problems is much wider than simply preserving the number of ships. We cannot make full use of our emerging ship maintenance opportunities because of a shortage of components and even whole systems of weapons and equipment. Ships which are 15-20 years old could still go on sailing, but ships which are in a worse state have to be "cannibalized" to restore the combat readiness of the better ones.

[Maryukha] But, Georgiy Nikolayevich, is the gravity of the economic situation not merely a way of exonerating the Fleet personnel, who are often to blame for equipment going out of commission, for their low level of professionalism?

[Gurinov] It is our fault that, with the deterioration in the level of manning, sailors' attitude to the performance of their duties has also deteriorated. Hence the accidents for which the personnel are to blame. It is simply inconceivable that this situation can be instantly redressed, and that includes the employment of people on contract. Commitment cannot be expected from the latter in the short run. And that is primarily because we have not yet been able to remove them from their old milieu.

[Maryukha] But might this not become possible after the implementation of the Russian Government's October decree which provides for an increase in appropriations for servicemen's social needs in the Maritime Kray through the sale of decommissioned ships?

[Gurinov] The government document primarily affects the development of the Maritime Kray. As far as the sale of decommissioned ships is concerned, there is a paragraph on that score, but there is no mechanism for putting it into effect. So all the social benefits have to

paid for out of budgetary allocations. And in October, for example, social benefits took up a total of 21%, while pay accounted for 60%.

[Maryukha] Georgiy Nikolayevich, given this state of finances, as I understand it, the Fleet will be unable to cope with another equally painful problem. I mean the problem of recycling decommissioned nuclear-powered vessels, the burial of radioactive waste products, and, most importantly, not so much the liquid as the solid waste...

[Gurinov] There is a government decree on that score, but the financing of the work is very poor, although the situation regarding the dismantling of nuclear-powered vessels is better here than in the Northern Fleet. Around 40 submarines have been withdrawn from service in the Fleet, the reactor cores have been removed from half of them, and five ships have been made completely ready for recycling. But again funds are needed to prepare the burial sites, to renew crane facilities, special transport ships, and so forth. Funds to deal with the ships already taken out of service are needed, while we do not even have the means to pay properly those who are stuck on old tubs with nuclear reactors on board.

[Maryukha] One gets a pretty depressing picture. Will the emerging trend toward the Pacific Fleet's making a recovery really be ruined merely by lack of resources?

[Gurinov] Everything here turns into a problem today: Placing an order for a tug is a problem; maintaining a tanker, which the Fleet is short of, is a problem which the Fleet tackles by leasing out two other tankers. Auxiliary and service ships have had to make ends meet through their own efforts for a long time now. Housing for sailors has to be built by bringing in foreigners. But I am certain that, if the resources currently going abroad were put at our disposal, our people would serve and work no worse and no better than the foreign contractors.

REAR SERVICES, SUPPORT ISSUES

Directive on Privatization of Defense Motor Vehicle Enterprises

94UM0078A Moscow ROSSIYSKIYE VESTI
in Russian 28 Oct 93 p 1

["Directive on Privatization of Motor Vehicle Enterprises Having Mobilization Tasks"]

[Text] State Committee of the Russian Federation on Control of State Property: Directive on Privatization of Motor Vehicle Enterprises Having Mobilization Tasks

No 1041-4 (with amendments and supplements), [dated] December 7, 1992

In order to preserve the mobilization readiness and stable functioning of motor vehicle enterprises when they form joint-stock companies and are privatized:

1. Approve the "Statute on Privatization of Motor Vehicle Enterprises Having Mobilization Tasks" (Appendix No 1) which has been coordinated with the Ministry of Transport, the Ministry of Economics, and the Ministry of Defense of the Russian Federation.
2. Approve Appendix No 2, which establishes the procedures for reflection of obligations to perform mobilization tasks in the charters of the joint stock companies.
3. Approve a standard contract between the seller and buyer on performance of mobilization tasks (appendix No 3, not cited).

Committee Chairman A. B. Chubays Registered in the Ministry of Justice of the Russian Federation October 4, 1993, registration No 335.

Appendix No 1 to the directive of the State Committee of Russia, dated 7 December 1992, No 1041-4

Statute on Privatization of Motor Vehicle Enterprises Having Mobilization Tasks

1. The statute defines the conditions of privatization of motor vehicle enterprises, some of whose property is intended to make up military motor columns for the needs of the Defense Ministry of the Russian Federation, and to perform mobilization tasks.

The basic funds, mobilization reserves and untouchable reserves of property counted in these columns and formations, henceforth called the Property, are intended for performance of mobilization tasks.

2. The privatization of motor vehicle enterprises which contain the above columns and which perform mobilization tasks is implemented in accordance with decisions of the Government of the Russian Federation, by the procedures established by the decree of the Government of the Russian Federation dated November 18, 1992, No 906.

The Property which is the mobilization reserve is excluded from the property of the privatized enterprise and is retained by the enterprise in essential storage. Utilized basic funds of motor vehicle enterprises counted as part of mobilization capacities and used in current operation are included in the charter capital of the joint-stock company. The procedures for further use are determined by the standard contract for performance of measures of mobilization preparation.

3. In developing the charters of joint-stock companies created on the basis of motor vehicle enterprises having mobilization tasks, it is necessary to allow for the type of activity in the charter of the joint-stock company in accordance with appendix No 2 to the Directive of the Russian *Goskomimushchestvo* [State Committee for Control of Property] dated December 7, 1992, No 1041-r.
4. Performance, by the privatized motor vehicle enterprise, of the established mobilization tasks in accordance with the legislation in force, which must be reflected in the constituent documents of the privatized enterprise, and in the contract between the seller and buyer in accordance with Appendix No 3 to the Directive of the Russian *Goskomimushchestvo* of Russia dated December 7, 1992, No 1041-r is a mandatory condition of privatization.
5. The privatization documents, including the privatization plan, the assessment document of the Property, and the charter of the privatized enterprise, are presented by the working commission on privatization to the corresponding committee for control of property, by the procedures established by the decree of the Government of the Russian Federation dated November 18, 1992, No 906.

In order to preserve the earlier-established mobilization tasks, the documents must contain the following provisions:

5.1. Obligations of the new owner:

- To utilize the basic funds assigned for performance of the mobilization task in compliance with the rules of technical utilization and to maintain its technical condition at the established level.
- To preserve the Property which is the mobilization reserve and the untouchable reserve by the procedures provided for by the manuals and norms in force.
- To ensure performance of the established mobilization tasks and conduct of mobilization preparation in accordance with the legislation in force and the decisions of the government of the Russian Federation.
- To deliver the Property complete and operable and to ensure transfer of the military motor columns and special formations at the established deadlines in accordance with the mobilization task.
- To ensure timely restoration and repair of the operated basic funds and other Property.
- To restore and operate the Property at his own expense.

5.2. Rights of the new owner:

- To use the Property on the basis of his charter goals and tasks.

- To receive all income from operation of the Property.
- By the procedures established by the government of the Russian Federation, to receive funds to finance the measures of mobilization preparation.

5.3. Responsibility of the new owner:

- On failing to meet obligations to ensure mobilization preparation and implementation of mobilization tasks, the management will bear responsibility in accordance with the legislation in force.

5.4. The conditions of liquidation or reorganization of the privatized enterprise:

- Reorganization and liquidation of the enterprise will be implemented with the participation of representatives of the organs establishing and monitoring the mobilization tasks under conditions which preserve the mobilization preparation and ensure performance of the mobilization tasks established for that enterprise.
- Amendments and supplements to the constituent documents, and the contract between the seller and the buyer, will be duly entered with retention of the above obligations and conditions.

First Deputy Minister of Defense of the Russian Federation, A. A. Kokoshin

Deputy Minister of Transport of the Russian Federation, V. F. Berezin

Deputy Chairman, Goskomimushchestvo of the Russian Federation, P. P. Mostovoy

Deputy Minister of Economics of the Russian Federation, I. S. Materov

Acting Chief, GOMU GSh [Main Organization-Mobilization Directorate of the General Staff], Lieutenant-General V. T. Bondartsev

Appendix No 2 to the Directive of Goskomimushchestvo of Russia, dated December 17, 1992, No 1041-r

Procedures for reflection of obligations in the charters of joint-stock companies for performance of mobilization tasks in accordance with the Edict of the President of the Russian Federation of March 21, 1992, No 288.

Article 3, point 3.2. indicates the type of activity which reflects the specific features of motor vehicle enterprises which are mobilization facilities having permanent mobilization tasks or which have property which is intended to perform mobilization tasks:

Performance of duties of mobilization preparation and a mobilization task in accordance with legislation in force, by signed agreements for performance of mobilization preparation and approved mobilization plans which are

in accordance with the Edict of the President of the Russian Federation of March 21, 1992 No 288, and the order for republic needs.

Correction

An error was made in the text of "Clarifications of the State Tax Service of the Russian Federation on Individual Questions Associated With the Use of Tax Legislation on Taxation of Profit (Income) of Legal Persons" dated September 14, 1992, No VG-4-01/145n, registered in the Ministry of Justice of the Russian Federation on September 30, 1993, registration number 354, and published in KURYER No 367, October 1993.

Paragraph 4 of point 13 of said Clarifications should read: "Since the affiliates themselves in their organizational-legal form do not meet the requirements of the Statute on Joint-Stock Companies, and do not form charter capital (a fund), then the above procedure for formation of reserve funds and the benefits provided in this regard on taxation of profit do not apply to them."

Military Housing In Moscow MD Area

94UM0083A Moscow KRASNAYA ZVEZDA in Russian
5 Nov 93 p 1

[Article by Yuriy Gladkevich: "Government Prepared to Pay Housing Debt to Military, But For Additional Fee"]

[Text] An apartment building for Moscow garrison servicemen who lack apartments has been built on Yenisey Street (Babushkino). Although the event is a joyful one, it is quite commonplace and hardly a matter, it would seem, that would require correspondence between two top officials—the Russian Federation defense minister and the mayor of the capital. However, General of the Army Pavel Grachev has nevertheless been forced to ask Yuriy Luzhkov to order the municipal housing department to turn the building over to the Ministry of Defense without withholding 12 percent of its space "for resettlement of citizens from dilapidated and small housing structures" (and these are the terms on which, in 1985, the Moscow City Soviet transferred the parcel of land for the construction project to the Apartment Operation Administration in Moscow). The need to make adjustments in the previous agreement is valid: The Moscow authorities owe the military a great deal of housing—a debt that, despite repeated directives and edicts by the Russian president, has yet to be paid. Funds previously appropriated by the government to build the housing were spent on other purposes.

The Russian Ministry of Defense Chief Apartment Operation Administration recently told us that the results of the review of the defense minister's letter are still unknown.

There is nothing wrong with the fact that the capital's authorities, when it comes to someone else's commitments, firmly adheres to the principle, "give us what is ours and sin no more." The problem is that the

Moscow government, to all appearances, does not intend to act in an equally uncompromising manner when it comes to its own commitments and to orders issued to it by the Russian government and Russian Federation president.

Since the Russian president's well-known edicts of February 19, 1992, and July 21, 1992, in which he directed the authorities of Russian cities and regions to pay their housing debts to the military, KRASNAYA ZVEZDA has repeatedly written about how poorly these edicts are being carried out. Chief administrators have calmly torpedoed payment of the debts, without any fear of being held liable, for all practical purposes. The end result is that the issue of paying these debts has been tightly linked to additional financing from the Russian budget.

But even that is not enough. Judging from the current position of many "debtors," additional financing must be extended for the entire debt repayment process and become a necessary condition for it. And Moscow is among the most consistent proponents of this position.

In late 1992, at the request of the Russian Federation defense minister and the mayor of the capital, the Russian president issued a directive that Moscow be given an additional 2 billion rubles to finance housing construction to pay the debt owed to the Ministry of Defense. These funds were deposited in the Moscow government's accounts on January 25, 1993. Of this sum, 800 million rubles was immediately spent to pay for 40,500 square meters of housing allocated to the Defense Ministry in 1992. The remaining housing owed, consequently, amounted to 140,000 square meters, with 1.2 billion rubles left over. That amount of money could theoretically be used to build roughly another 40,000 to 50,000 square meters of housing. But... As of October 15 of this year, only 5,500 square meters of the 140,000 had been actually turned over as payment of the debt. In effect, the money has been frozen and are melting away like a first snow in the flames of inflation.

All attempts by the Defense Ministry and the Joint Committee of Moscow Servicemen on Housing Issues to promptly obtain housing with the allocated funds have been to no avail, to put it mildly. Moreover, officials of the capital's municipal housing department and the Moscow government are gradually trying to persuade the Defense Ministry that the remaining funds will be enough for only just over 2,000 square meters of housing. For example, E. Yakushenko, first deputy chief of the municipal housing department, said this in a report in September to the Moscow City Soviet's standing commission on military affairs. And V. Resin, first deputy premier of the Moscow government, in a letter to Russian Federation Deputy Defense Minister Colonel-General V. Toporov, reported, obviously with an eye to the future: "The plan for this year envisions full payment of indebtedness with respect to implementation of the RSFSR Council of Ministers' edicts although the

Russian Ministry of Finance's capabilities to finance said construction give rise to some apprehension" (emphasis mine—Yu. G.).

Moreover, V. Resin's letter makes clear that the 4,800 square meters that the Moscow government allocated to the Defense Ministry in the first six months of this year are now "going" at almost 180,000 rubles per square meter. Consequently, of the 1.2 billion rubles, no more than 486 million remains until the end of the year. Mr. Resin, now citing the housing's auction value for some reason, promises just 1,000 square meters for that money. Obviously, all this should be taken to mean the following: If you want us to pay the debt in full, ask the president, petition the Russian Federation government and Ministry of Finance, and obtain new financial infusions. Or, to put it more simply, we'll pay the debt, but for an additional fee.

"We categorically disagree with this position," said Colonel Nikolay Filippenko, deputy chief of the Russian Defense Ministry's Chief Apartment Operation Administration. "After all, how did the debt arise? Money to build housing for servicemen has always been appropriated from the state budget on a regular basis. And the housing has been built. But we haven't gotten it—it's gone to where the local authorities deemed necessary. Why should the military now have to answer for mismanagement on the part of officials of that level and their inability to properly organize things?"

A legitimate question. Especially since there are examples of a completely different approach to this question. For example, Moscow Oblast was also on the "debtors" list. However, as of today the oblast administration has paid its housing debt to the Defense Ministry in full—and without any additional financial infusions from the state budget. It was able to come up with the money from various local budgets and to earn it at housing auctions. So is it also possible to honestly repay the debt?

It is possible, and this was been demonstrated not just by Moscow Oblast. Tver Province has settled its debt in full, and Murmansk, Volgograd, and Samara Oblasts are also conscientiously repaying them—and they are not having to ask for additional financing either. But St. Petersburg is asking for more money, as are Kaluga, Ryazan, and other oblasts.

I don't want to offend anyone, but I can't help pointing out the following: Even among criminals, even a gambling debt is viewed as a debt of honor. And in this instance the debt is for a roof over the heads of hundreds of thousands of servicemen's families, people who, by virtue of the special features of military life, are already deprived of many elementary consumer amenities. And unlike many state bureaucrats, these people, despite this, take a far more understanding view of the difficulties currently being experienced by the federal government. This view was expressed by General of the Army Pavel Grachev in one of his letters to the mayor of Moscow: "The Ministry of Defense does not consider it possible to

ask the Russian Federation president a second time to finance yet again the construction of housing for servicemen to repay the existing debt, since the existing practice of the Moscow government (and of officials of other regions, I might add—Yu. G.) is blocking implementation of the president's edicts."

This being the case, perhaps we should listen to a proposal from the Joint Committee of Moscow Servicemen on Housing Issues, as set forth in a petition to Russian President Boris Yeltsin: In view of the fact that implementation of his edicts and of decrees of the Russian Federation government is encountering active resistance from local government officials, we propose that those responsible be held accountable. In 1992-1993, no accountability mechanism has existed, for all practical purposes. Hasn't the time come to put an end to this flawed practice?

Hitches in New Contract Service System Noted

PM2311161793 Moscow KRASNAYA ZVEZDA
in Russian 23 Nov 93 pp 1, 3

(Interview with Colonel General Valentin Yakovlev, first deputy chief of Russian Federation Defense Ministry Main Directorate for Training and Placement of Cadres, by Nikolay Poroskov; place and date not given. "A Contract Is a Rigid Pledge to the Army and the People. Does Everyone Understand This?"—first two paragraphs are introduction)

[Text] Russia's Armed Forces have gone over to the mixed manning principle, which provides, in addition to the draft, for Russian Federation citizens to enter into service on a voluntary contract. When the very first contracts were concluded, commanding officers, chiefs, and cadre organs encountered a number of instances where graduates of military educational institutions refused, on being appointed to a post, to go to the new place of service and insisted on canceling the contract.

We asked Colonel General Valentin Yakovlev, first deputy chief of the Russian Federation Defense Ministry Main Directorate for Training and Placement of Cadres, to explain the legitimacy of those graduates' actions.

[Yakovlev] The reason for the refusals is that some officers, failing to understand correctly certain provisions of the Russian Federation Law "On Military Service Obligation and Military Service," insist on an early discharge at their own request.

[Poroskov] Are there many such "refuseniks"?

[Yakovlev] The tally runs to tens.

[Poroskov] Maybe, Valentin Alekseyevich, young people simply did not have it explained to them what awaits them in this case, or maybe some of them have not clapped eyes on the necessary documents?

[Yakovlev] This is not so. Every 1993 graduate was personally presented with a properly printed "Collection

of Normative Acts," which included the "military package" of laws and the main documents concerning military service. The title page of the brochure bears this text: "To Lieutenant (surname, forename, patronymic), graduate of (name of the military VUZ [higher educational institution]), who has devoted himself to an honorable and noble cause—the defense of the fatherland, the Russian Federation—from Army General P.S. Grachev, Russian Federation minister of defense." Of course, there is no shortage of oral explanations of the laws as well. So those who plead ignorance are acting against their conscience.

[Poroskov] And yet, since there are such people, it will not be superfluous to speak of the reasons and the grounds on which an officer serving under contract can be discharged ahead of schedule.

[Yakovlev] These are provided for in Article 49 of the Russian Federation Law "On Military Service Obligation and Military Service." Part one sets out the grounds which provide for an officer's compulsory early discharge from military service: He is being deemed unfit or only partially fit for military service by a military medical commission, his receiving criminal punishment in the form of deprivation of liberty, and also his being stripped of his military rank.

Part two provides an exhaustive list of the grounds on which the command has the right to early cancellation of a contract with servicemen: In connection with table of organization measures; a serviceman's failure to fulfill the terms of the contract; the committing of a misdemeanor discrediting a serviceman's honor; if a serviceman has ceased to meet the demands prescribed for him.

Finally, Part four of Article 49. It lists the grounds on which a serviceman performing military service under contract has the right to early discharge from military service. They include being deemed partially fit for military service by decision of a military medical commission; the impossibility, on medical grounds, of a member of a serviceman's family living in the locality where he is serving; care for a family member in need of outside assistance who is not fully maintained by the state, in the absence of other persons obliged by law to maintain and care for the said family member. Two more reasons are stipulated in this part of Article 49: If a serviceman is raising a child without the mother or if the mother of the serviceman himself has, in addition to him, two or more other children under the age of eight years who are being raised without her husband.

No other grounds are envisaged for the contract's early cancellation on the serviceman's initiative, and he is obliged to serve out in full the term stipulated in the contract. For a student, this is the time of instruction and five years subsequently.

[Poroskov] But you will agree, Valentin Alekseyevich, that a subjective factor might creep in when interpreting

the law. What, for example, is to be understood by the expression "table of organization measures"?

[Yakovlev] This is a package of measures currently connected above all with the reduction of the Armed Forces and the reforming of the Army and Navy. It consists in the reorganization of units, combined units, organs of directorates, branches of the Armed Forces, and organizations and enterprises of the Russian Federation Ministry of Defense. Here roughly the following work is carried out with the officers being released: If a subunit is reduced in a regiment, the officers of this subunit are accommodated in vacancies within the regiment or in another unit, combined unit, large strategic formation, or branch of the Armed Forces. Only those officers whom it does not seem possible to accommodate are discharged when complements are reduced.

In accordance with organizational measures, a military unit can change its place of stationing. Accordingly, officers are obliged to leave together with the unit for the new place of service. If the unit is disbanded or reorganized at the new place, then the question of accommodating or discharging the released officers is resolved according to the same procedure as mentioned above.

[Poroskov] Another point about the terminology of legislation. Some wordings have a very generalized, bland form: "Failure to fulfill the terms of the contract," "ceased to meet the demands laid down in accordance with the law...." What specific meaning do they have?

[Yakovlev] The law probably should not be as detailed as you suggest. But this is a sore point. There should be normative acts concretizing articles of the law, but there are none. The Ministry of Defense has prepared a draft "Statute on the Procedure for Performing Military Service" which clarifies every point. It has been agreed with the Ministry of Internal Affairs and the Ministry of Security, which take their cue from us in this sphere. But it will evidently be some time before the document comes into force with the status of a law—it will now be adopted by the new legislative organ.

[Poroskov] Can an officer, nonetheless, be discharged at his own request today?

[Yakovlev] Article 57 (Paragraph 2, Part 3) of the aforesaid law grants this right only to officers who have not concluded a contract, but only if their total length of service as an officer is at least five years after graduating from a vocational educational establishment. For those who have concluded a contract, early discharge at their own request is not provided for and cannot be carried out by the command.

[Poroskov] But there are no graduates of military educational institutions who have not concluded a contract....

[Yakovlev] This is so, for in accordance with the law all students are obliged to conclude a contract, for otherwise they cannot continue their studies.

[Poroskov] How does the command react to a lieutenant's refusal to go to the specified garrison?

[Yakovlev] A number of officials among the troops, without beating about the bush, have returned such people to the military VUZ's. We sent a telegram: The Army needs these people, and so carry out explanatory work, employ measures of social influence, and give the maximum assistance in resolving social and everyday issues.

[Poroskov] What kind of reasons, in your view, prompt lieutenants to refuse service, though presumably they had decided to devote their life to it?

[Yakovlev] Working among the troops, we have seen for ourselves that the majority are prompted to make such a radical decision not by commanding officers or the conditions of service but by difficulties with housing, low pay, and the fear of going to a remote locality. Sometimes they are egged on by relatives who lecture them: If you discharge yourself, you will earn good money, buy an apartment.... It is far from always that a young man receives these promised benefits. There are even guys who ask to rejoin the Army.

[Poroskov] Of course, a military VUZ graduate with an excellent education and the diploma of a driver, programmer, electronics specialist, etc. will be taken on by any civilian enterprise. But the Ministry of Defense has trained him, clothed and fed him, and, in short, has borne considerable costs connected with him, and it would be reasonable to claim on "promissory notes" from the young man....

[Yakovlev] The note to Appendix No. 1 to Article 15 of the Interim Statute on the Procedure for Concluding Contracts and Discharging Servicemen From the Russian Federation Armed Forces points out that in the event of a serviceman's early discharge Point 3 of Article 49 of the Russian Federation Law "On Military Service Obligation and Military Service" comes into force, i.e. the sanctions laid down in the Statute on Servicemen's Material Liability will be applied to the serviceman. But this statute simply does not exist. When it comes right down to it, the principle of contract manning should not have been introduced at all before it came into force. For

the cost of training an officer amounts, at a rough estimate, to 10-15 million rubles at last May's prices. And today, of course, it is much more.

[Poroskov] Is any other liability provided for in this case? Criminal liability, for example?

[Yakovlev] In the event of a refusal to carry out a chief's order or to carry out the responsibilities of military service on the part of servicemen who have concluded a contract or a failure to report for service on schedule without valid cause on being appointed or transferred or on returning from detached service, from leave, or from a medical institution or when evading military service, proceedings can be instituted against these servicemen in accordance with the Russian Federation Criminal Code. If there is a case to answer, the unit's commanding officer is obliged to institute criminal proceedings, carry out urgent investigative actions, and forward the case to the military prosecutor within 10 days of instituting proceedings. There have already been such instances. The court decides the penalty.

[Poroskov] And yet, as life shows, lieutenants leave and the competition for military schools and academies is not what it used to be. Will the officer corps not be left without reinforcements?

[Yakovlev] A paradoxical situation has taken shape today: It is necessary to discharge quite a lot of officers who have served out their prescribed terms, while at the same time there is a shortage of people in primary posts. But this state is by no means deplorable. The majority of young officers still settle in the Army, and they have good prospects for advancement today. The leadership of the Ministry of Defense is taking measures to improve housing conditions, and garrisons are being moved out of swamps and godforsaken holes, closer to cultural centers.

In accordance with the president's edict, the 15,000 specialists that the Army needs will be drafted into the Armed Forces annually during 1993-1994. The first order has already been prepared. In addition, reserve officers are permitted, if they so wish, to conclude a contract with the Ministry of Defense. So the reinforcements of the officer corps will not dry up. Life will suggest new solutions.

UKRAINE

President Kravchuk on Ukrainian National Security

94UM0088A Kiev *NARODNA ARMIYA* in Ukrainian
26 Oct 93 p 1

[Decree of the Supreme Council of Ukraine dated 19 October 1993 "On the Military Doctrine of Ukraine" and statements by President of Ukraine Leonid Kravchuk under the rubric "Book of Quotes": "What Leonid Kravchuk Thinks About..."]

[Text]

Decree of the Supreme Council of Ukraine "On the Military Doctrine of Ukraine"

The Supreme Council of Ukraine decrees:

To approve the military doctrine of Ukraine submitted by the president of Ukraine and revised with proposals and remarks by standing commissions of the Supreme Council of Ukraine and people's deputies of Ukraine taken into account.

[Signed] Chairman of the Supreme Council of Ukraine I. Plyushch

What Leonid Kravchuk Thinks About...**The Military Doctrine of Ukraine**

"The strategic task of Ukraine in the defense area is to protect its state sovereignty and safeguard its territorial integrity and the inviolability of its borders. The military doctrine adopted on 19 October has a defensive nature aimed at the preservation of peace, prevention of war, adherence to the principle of not being the first to use military force, and noninterference in the internal affairs of other countries...."

Strength of the Armed Forces

"In keeping with a decision of the Supreme Council, the strength of the Armed Forces will amount to 450,000, which comes to 0.8 percent of the population of Ukraine. However, this number does not represent a dogmatic approach to the Armed Forces. Let us say openly: At present, it is not numerical strength that acts as a guarantee of national security. The experience of local wars indicates that a policy of qualitative rather than quantitative development should be pursued in building up the Armed Forces."

Requirements for the Armed Forces of Ukraine

"The defensive orientation of Ukraine's military policy, the renunciation of an unequivocal selection of directions of military threat, determination of the possibility of its emergence from any direction, and an opportunity to be equally strong everywhere predetermine the corresponding requirements for the Armed Forces of Ukraine.

"To ensure the state security of the state, which shares land borders of considerable length with a large number of adjacent states, its Armed Forces should be highly mobile and capable of ensuring timely concentration and deployment of the necessary groups of forces on threatened directions in order to repulse the aggression of a possible enemy."

Technical Equipment of the Army and Modernization of Weapons

"We need more profound reform of the Armed Forces, and the doctrine the Supreme Council has approved offers such an opportunity. The task is for the Ukrainian Armed Forces to be equipped with modern, high-technology weapons and materiel. To this end, we should have the necessary scientific and production base capable of developing and manufacturing new types of weapons.

"...Reinforcement of the defense capability of Ukraine and its security remain an objective reality because in the contemporary situation no state in the world can develop normally in the absence of this. All of this calls for focusing efforts on the modernization of weapons that have acquitted themselves well in the Armed Forces and the development of resources for armed combat that meet contemporary requirements. At the same time, it is necessary to concentrate our attention on preparing future technological breakthroughs which may ensure the high fighting capability of the Armed Forces of Ukraine. I would like to stress that Ukraine does have such opportunities."

Decree on Ukraine Military Doctrine

94UM0087A Kiev *GOLOS UKRAINY* in Russian
29 Oct 93 pp 2, 8

[Ukraine Supreme Council Decree on Ukraine Military Doctrine signed by Ukraine Supreme Council Chairman I. Plyushch in Kiev 19 October 1993]

[Text]

UKRAINE SUPREME COUNCIL DECREE**On Ukraine Military Doctrine**

The Ukraine Supreme Council decrees:

Approve the Ukraine Military Doctrine submitted by the President of Ukraine and revised taking into consideration the proposals and comments of the Ukrainian Supreme Council's Standing Commissions and People's Deputies of Ukraine.

Chairman, Ukraine Supreme Council
I. PLYUSHCH

Kiev, 19 October 1993

Ukraine's strategic task in the defense area is to protect its state sovereignty and political independence and preserve territorial integrity and inviolability of borders.

Ukraine can and must become an influential state capable of playing a significant role in ensuring political, economic and military stability in Europe and throughout the world.

In proclaiming its Military Doctrine, which is defensive in nature, Ukraine proceeds from the fact that it is not a potential enemy of a single specific state.

Ukraine views its military security as a state of military protection of national interests under conditions of a potential and real military threat.

Ukraine's Military Doctrine is a component part of the national security concept and represents a combination of fundamental aims and principles approved by the Ukrainian Supreme Council on organizing and ensuring security of the individual, the people and the state by political, diplomatic, economic and military measures.

1. MILITARY-POLITICAL ASPECTS

1.1. Ukraine's Military-Political Goals and International Priorities in the Area of National Security.

The principal goal of Ukraine's military policy is to guarantee Ukraine's national security against external military threat, prevent war, and maintain international peace and security.

Ukraine builds its relations with other states based on principles of equality, mutual respect, mutual benefit, nonintervention in internal affairs and other generally recognized principles and rules of international law embodied in part in the UN Charter, the Helsinki Final Act, and documents of the Conference on Security and Cooperation in Europe.

In implementing its foreign policy and military policy course in accordance with national interests, Ukraine:

- advances no territorial claims on other states and recognizes no territorial claims on itself;
- complies strictly with the principle of the inviolability of existing state borders;
- respects the state sovereignty and political independence of other states and recognizes their right to decide all questions of their own national security in accordance with their own interests without detriment to the security of other states;
- promotes parity, balanced reduction of all kinds of armed forces and arms in the region and the world based on conditions of ensuring each state's defense sufficiency;
- defends the resolution of all contradictions among states only by political and other means accepted under rules of international law, and by the assumption of mutual nonaggression obligations by all states;
- arranges its relations with other states regardless of their sociopolitical system and military-political orientation based on mutual consideration of all national security issues of the parties;
- prohibits use of its own Armed Forces for accomplishing political tasks on its territory;

- opposes the stationing of foreign troops on its territory and on the territory of other states without their consent;
- rules out its unilateral total disarmament.

Ukraine favors creating all-encompassing universal and general European security systems and considers involvement in them to be an important component of its own national security.

Adhering to a nonaligned status, Ukraine promotes creation of reliable international mechanisms and a general European security structure on a bilateral, regional and global level for confidence-building and partnership based on principles of mutual understanding and openness in military-political activity.

1.2. Causes of Military Danger. Ukraine's Attitude Toward War.

Economic, political, territorial, national-ethnic, religious or other contradictions which are not always resolved by states by mutual agreement can become the principal causes of wars and military conflicts.

Ukraine will consider as its potential enemy a state whose consistent policy presents a military danger for Ukraine and leads to interference in Ukraine's internal affairs and to infringement on its territorial integrity and national interests.

Ukraine condemns war as a national policy tool, adheres to the principle of the nonuse of force or the threat of force, and strives to resolve all international disputes and conflicts exclusively by political methods.

Ukraine participates in reducing troops and conventional arms based on corresponding international agreements while taking into account the need for keeping its own defense capability at an appropriate level.

Respecting the right to freedom of sociopolitical choice by each power, Ukraine rules out military intervention in that power's internal affairs.

Ukraine's principal goal in a possible war is repelling armed aggression; the protection of state sovereignty, political independence and territorial integrity; and the most rapid ending of military operations by political and diplomatic means.

Ukraine employs its Armed Forces exclusively in cases of armed aggression against it and infringements on its territorial integrity and inviolability of state borders, or in fulfilling its international obligations.

In case a war breaks out, the state and its Armed Forces will adhere strictly to their obligations specified by international agreements with respect to protecting victims of armed conflicts.

1.3. Ukraine's Attitude Toward Nuclear Weapons and Other Kinds of Weapons of Mass Destruction.

Based on the catastrophic consequences of a nuclear war for all mankind, Ukraine considers the use of nuclear weapons inadmissible.

Ukraine actively favors universal nuclear disarmament in its foreign policy activity. Having become the possessor of nuclear weapons inherited from the former USSR due to historical circumstances, Ukraine never sanctions their use and eliminates the threat of the use of nuclear weapons from its foreign policy arsenal.

Ukraine intends to become a non-nuclear-weapon state in the future.

Ukraine links the reduction and destruction of nuclear weapons stationed on its territory with adequate actions of other nuclear states and with reliable guarantees of its security given by them and the world community.

Ukraine opposes the proliferation of technologies for producing nuclear, chemical and biological (bacteriological) weapons.

2. MILITARY-TECHNICAL ASPECTS

2.1. Basic Directions of Ensuring Military Security.

Basic tasks for ensuring military security are as follows:

In peacetime—

- forecasting the goal and nature of a possible war, so as to prevent it;
- organizational development of its own Armed Forces within the limits of the international obligations it has assumed;
- establishing and maintaining military potential at a level sufficient to deter armed aggression;
- ensuring the inviolability of the state borders in the air, on land and at sea;
- stopping possible provocations and infringements on the country's sovereignty;
- maintaining constant Armed Forces readiness to repel possible aggression on the part of any state or coalition of states from aerospace, from land or from the sea;

In wartime—

- mobilizing all the country's material and human resources for repelling armed aggression;
- inflicting damage on the aggressor;
- denying him an opportunity to continue the war;
- stopping military operations on terms favorable to Ukraine.

Ukraine's military security is achieved through the following:

- unified political-diplomatic efforts aimed at lowering the level of military confrontation;

- establishing zones free of weapons of mass destruction and regional security systems;
- active collective actions to resolve conflicts that arise;
- the presence of permanent-readiness troops and of reserves which would ensure repelling aggression, because of their numbers, outfitting, combat coordination and degree of deployment;
- the mobilization and strategic deployment of all branches of the Armed Forces, and the state's organized entry into war;
- the ability to conduct military operations on land, at sea, in near space and in the air;
- the assurance of a high level of the personnel's moral-psychological and professional training for performing missions of warfare under any conditions of a combat situation;
- outfitting the Armed Forces with the latest weapons of warfare;
- the readiness to assign appropriate military contingents to UN forces to conduct military operations in accordance with a Security Council decision in order to stop aggressive actions by individual states or groups of states and to keep peace and security in various regions.

2.2. Armed Forces Missions and Principles of Organizational Development.

The basic mission of the Armed Forces is to protect Ukraine's independence, territorial integrity and inviolability. Their organizational development is carried out in accordance with national legislation and with international treaties and agreements on military matters ratified by Ukraine.

The following are the basic principles of Armed Forces organizational development:

- operational-tactical, mobilization, combat and moral-psychological training of personnel taking into account the laws of war and the principles of military art;
- manning based on universal military obligation and contract with gradual transition to a professional army;
- military-patriotic education of pre-draft-age and draft-age youth and of personnel in national-historical traditions;
- resolution of the set of problems connected with servicemen's social protection;
- total exclusion of parties (prohibiting servicemen from taking part in the activity of political parties and movements).

Ukraine's Armed Forces are made up of branches, combat arms and other military force elements and installations necessary for ensuring the state's defense capability and prescribed by the legislation in force.

The following are qualitative features of the organizational development of Ukraine's Armed Forces: combat capability, combat effectiveness, combat staunchness, mobility, information capacity [informirovannost], capacity for command and control [upravlyayemost], survivability, and readiness for mobilization and the performance of a combat assignment.

2.3. Training the Armed Forces to Defend Against Aggression.

Combat readiness and the disposition of the Armed Forces on Ukrainian territory is determined by the need to organize the effective defense of land and sea frontiers in all directions and to ensure the aerospace defense of important administrative centers, industrial installations and potentially dangerous installations.

In the balanced organizational development of branches of the Armed Forces, combat arms and special troops, the priority in development is given to high-precision weapons of increased power; to reconnaissance, aerospace defense and EW forces and equipment; to missile troops; to aviation and airmobile units; and to advanced classes of surface ships and submarines.

Ukraine's Armed Forces are outfitted with unified systems for automated command and control, communications, electronic-fire effect and metrologic support. A unified information space is being established on Ukrainian territory in support of all branches of the Armed Forces and combat arms.

The Ukrainian Armed Forces are mastering defensive, counteroffensive and offensive kinds of operations in the process of operational-tactical, mobilization and combat training. They are preparing to choose effective forms and methods of military operations which meet the situation at hand and help grab the initiative from the enemy and keep it.

The cadres training and education system in the Ukrainian Armed Forces is a component part of the statewide educational system and ensures training of military specialists in peace and wartime.

The Border Troops, National Guard, Security Service, Internal Security Troops and armed prisoner escort security troops of the Ministry of Internal Affairs, and Ukrainian Civil Defense formations operate together with the Ukrainian Armed Forces in wartime.

3. MILITARY-ECONOMIC ASPECTS

3.1. Goal and Principles of Military-Economic Policy.

The goal of Ukraine's military-economic policy is to maintain the state's appropriate defense capability with a sensible amount of military expenditures. Its own scientific-technical and production potential is oriented toward preserving and developing modern, highly efficient technologies, and on their basis creating weapon systems which permit effectively performing missions assigned to the Armed Forces within the framework of existing political, economic, international law and other restrictions.

The following are basic principles of Ukraine's military-economic policy:

- assurance of the maximum effectiveness of military production with the limited nature of financial and material resources;

- use of a competitive approach to developing and producing new weapon systems and military equipment;
- use of the contract approach to filling Ministry of Defense orders;
- achievement of high technological effectiveness of weapon systems and the necessary standardization level of their elements;
- ecologically safe and economically favorable recycling of weapon systems and military equipment subject to elimination;
- sensible conversion of military production.

Dual-purpose technologies (military and civilian) and the latest (competitive) technologies in which Ukraine has attained or can attain a world level are scientific-technological priorities.

Weapons and military equipment which increase the firepower and mobility of troops (forces) as well as weapon systems which are competitive in the world market are military-technical priorities.

The Armed Forces can be outfitted with modern weapon systems and military equipment as follows: own production, development and production jointly with other states, and purchase abroad.

Programs for material and social security of Armed Forces personnel enjoy priority financing.

3.2. Preparation of the State and Population for Defense.

The state's readiness for defense is ensured in peacetime by building a stable state and military command and control system and creating production capacities and mobilization stockpiles of material resources, and also by advance preparation of the national economy for meeting the needs of the population, Armed Forces and other military force elements.

The system of mobilization preparation of the national economy is coordinated with the system of mobilization deployment of troops (forces) and civil defense in order to increase stability of the economy and unfold mass military production.

The national economy is prepared for the process of logistic support of troops (forces) by the following:

- establishing mobilization stockpiles of arms, military equipment and other supplies, including in concentration (combat tasking) areas of troops (forces);
- establishing (improving) the state infrastructure for successful performance of missions by troops (forces);
- preparing in advance transportation for moving troops (forces) to areas of armed aggression;
- improving the system of logistic support to troops (forces).

The appropriate level of military training of persons subject to military service obligation is achieved by mastery of the weapons of warfare existing in the Armed Forces.

Ukraine's Military Doctrine is the foundation of its military organizational development and rests on an analysis of the world geopolitical situation and long-range scientific forecasts of its development. Doctrinal provisions are mandatory for state entities, organizations, self-governing entities and citizens of Ukraine and are the basis for coordinating their efforts in strengthening Ukraine's national security.

Concepts for organizational development of branches of the Armed Forces, combat arms and other military force elements of Ukraine and specific programs for their realization are developed based on the Military Doctrine.

Defense Minister on State of Armed Forces

94UM0089 Kiev NARODNA ARMIYA in Ukrainian
28 Oct 93 p 1

[Article by Minister of Defense of Ukraine Colonel-General Vitaliy Radetsky: "The Armed Forces of Ukraine—A Battleworthy, Directed Organism"]

[Text] Ukraine was the first of the new countries created after the collapse of the USSR that formed its own Armed Forces. The beginnings of that were laid down by the Law of Ukraine that was adopted by the Supreme Soviet of Ukraine on 6 December 1991, "The Armed Forces of Ukraine." The basic principles for the development of the Ukrainian forces were affirmed in it.

Over the almost two years that have passed since then, the processes of reformation of the forces of the former Soviet Army that were stationed on the territory of Ukraine and their transformation into the Armed Forces—guarantor of the territorial integrity and national independence of Ukraine—have proceeded gradually and ceaselessly through the efforts of the President, the government, the Supreme Soviet, the Ministry of Defense and all of the Ukrainian people.

In creating our own forces, we are adhering to the main provisions of the "Conceptual Framework of Defense and the Building of the Armed Forces of Ukraine," namely that there be three branches of the Armed Forces: Ground Forces (Ground Defense Troops), Air Forces (Airspace Defense Troops) and Naval Forces. The building of the Ukrainian Army has been pursued with a regard for reasonable sufficiency, both in structure and numbers and in arms. Ukraine, after all, needs an army that is capable of protecting the inviolability of its territory, but at the same time conforms to the principles of defensive sufficiency founded on the realities of the military and geopolitical interests of the state. I see the ideal Armed Forces of Ukraine, in short, as

comparatively small (on October 19 of this year the Supreme Soviet of Ukraine approved their size at 450,000 men), not expensive but able to frustrate a surprise air or space attack by an aggressor and, in reply, to inflict a decisive defeat on him, force him to come to his senses and seek out political solutions to any problems.

These qualities, which must be inherent in the Armed Forces of Ukraine, flow out of the foundation of the military organizational development of the state—the Military Doctrine of Ukraine, which was approved by the Supreme Soviet on 19 October 1993. It states in particular that Ukraine is not a potential adversary of any specific nation; the chief aim of its military policy is to guarantee the national security of the state against external military threats, avert war and support international peace and security. Ukraine, in resolving its political, economic, national, ethnic, ecological or other problems, has no territorial claims against any other state, recognizes their state sovereignty and political independence and acknowledges their right to resolve all issues of their own national security in accordance with their national interests without causing harm to the security of other states. We are building relations between nations on the principles of good neighbor relations and equal partnership.

Proceeding from these provisions, I feel that the core of military reform today is the structural and strategic restructuring of the Armed Forces. A contemporary army, according to world standards, has to be highly mobile, able to make its presence felt in any threatened sector of the geopolitical expanse of Ukraine, capable of immediate and active defensive operations and ensure the inviolability of our borders. Cutbacks in the army, the path we are taking today, should thus not be a step backward that would lead to a reduction in firepower and strike capabilities or the defensive or maneuvering capability of the troops. The sole way out is to reduce the size of the Armed Forces, modernize combat hardware, create arms based on new physical principles and utilize to the full the high technological and intellectual potential of the military-industrial complex and science.

The fighting ability of the army depends directly on the combat readiness of the troops. Quite a bit has been accomplished in this area of late—a clear-cut system of combat readiness was developed over 1992 and has been in effect since January of this year. A mobilization plan has been developed and approved, in accordance with which personnel, motor vehicles and other hardware have been registered.

But the actual situation with financial resources, fuels and lubricants is such that we were forced to cut back plans for troop training during the summer training period, and to conduct command/staff or staff exercises instead of field exercises.

A joint, two-stage strategic command exercise with the participation of the central apparatus of the Ministry of

Defense, the commanders and staffs of the Air Forces and the Navy, the military districts (operational commands), railroad troops, air armies and air-defense districts, as well as operational groups from the State Border Committee, the Ministry of Internal Affairs and the Security Service of Ukraine, the Chief Directorate of the Commander of the National Guard and the staff of the Civil Defense of Ukraine was thus conducted from 11 through 15 October of this year under the overall supervision of the Commander-in-Chief of the Armed Forces and President of Ukraine and under the direct control of the Minister of Defense.

The exercise was convincing that in a period of threat to the state, there has to be a unified body—the General Staff—to which all of the state military structures and agencies should be directly subordinate.

The training of the troops requires funding, of course, quite a bit of it. The state cannot now allocate the full amount needed. I thus feel that it is essential to conduct, as soon as possible, a full inventory of army property—arms, ordnance, matériel and, especially, land. The most essential must be retained, but the rest should be transferred to the national economy. The funds received from that would go to maintain the army and resolve its paramount problems.

The army, however, cannot resolve all of the issues connected with the insufficiency of budget appropriations on its own. The funds that were allocated to the Ministry of Defense in 1993 are sufficient only to cover the expenditures for those line items that cannot be cut back. These are the pay for servicemen, the wages of employees of the Armed Forces, the provision of food for conscript servicemen, material support and some fuels and lubricants. This situation with the appropriations, if the absence of reserves over and above the standards is taken into account, cannot help but have an effect on the combat readiness of the troops and the state of the weaponry and military hardware.

The shortfall of financial capabilities is causing the aging and breakdown of combat vehicles, artillery systems and the aircraft inventory, which used to be repaired at plants that are now located outside the borders of Ukraine. All of this suggests that the necessity has become acute of decisively stabilizing our own military-technical policy, which would be characterized by a systematic and coordinated approach to creating a national military-industrial complex and the formulation of a state program for the development of weaponry and hardware.

The development of domestic military science is directly connected with the non-nuclear future of Ukraine. We should even today be seeking an equivalent, able to guarantee the security of a state that voluntarily renounces nuclear weapons. The more so as a base exists in Ukraine for fundamental research in this realm.

If the burden of military spending is to be reduced, in my opinion, it would be expedient to envisage programs of

scientific research and experimental design whose results would have a two-fold utilization in the future—both in the interests of defense and in the national economy. We need to try to reduce the dependence of the scientific and technical realm on raw materials and constituent items from outside the state. The way out is to set up a self-contained (autonomous or partly autonomous) cycle for the production and testing of basic prototypes of weapons and military hardware.

One sometimes hears today that the funds allocated for defense are money thrown to the winds. I categorically disagree with that. The army, after all, is one of the basic factors that ensures the very existence of the state and military and national security as a whole, that is, prestige and strength. These funds are recouped a hundredfold through the creation of jobs for the civilian employees of the Armed Forces, the discoveries of military scientists, the guarantee of national security, etc.

A knot of unsolved problems in the army pertains to people: The officers, soldiers, generals and employees of the Armed Forces. Our history, going way back, testifies that the best soldier is a professional, a specialist. The acquisition of manpower on a fundamentally new basis—under universal military obligation and voluntarily, under contract—has been started in the Ukrainian army. The transition to an entirely professional army will require a certain amount of time and considerable funds. But all of the expenditures will be compensated for by the fighting ability of the troops, the high level of organization, the better preservation of military hardware and arms and the improvement of discipline. State measures that create attractive conditions for army service and provide an opportunity to retain competent specialists and educated and talented people—in which the Ukrainian land has always been rich—under contract are essential in order to achieve this.

Today, however, when most of the social problems of servicemen remain unsolved, there is no point in hoping for such a change. The low pay and lack of the necessary material support have sharply reduced the prestige of military service. The government of Ukraine has raised the monetary sustenance of servicemen as of 1 September of this year, but inflation has most unfortunately "eaten up" that increase, and the standard of living of the man in epaulets has not changed substantially. The commander of a platoon who for the most part was forced to begin his life outside his homeland, is building his family nest from virtually zero and is in the unit along with his personnel from morning until night, for example, gets a little over three hundred thousand karbovantsi. Need we calculate how much money he spends on food, on rented housing? Considerable sums. Our officer is thus lower on the social ladder than even a trolley driver or miner, not to mention a businessman or entrepreneur. Is this not the principal reason that young and promising officers are leaving the army today?

A problem of another type is the acquisition of conscript personnel for the Armed Forces. The conscripts today,

after all, are our reserves in wartime. And the greater the shortfall we have today, the worse the situation will be with reservists in the future. An analysis of manpower acquisition for the Armed Forces shows that since the discharge of soldiers and NCOs from two drafts (fall of 1991 and spring of 1992) at the same time in the fall of 1993, the manpower levels of the units and subunits were reduced considerably. Acceptance for service beyond the draft term has thus been launched, so as to maintain the necessary fighting ability of the troops. But that also entails considerable material resources, the lack of which is being keenly felt.

The Military Doctrine of Ukraine that has been adopted, as we see, has approved the structure and size of the Armed Forces. And that will make it possible to determine the military budget and conclude the development of the state program for the organizational development of the army in accordance with the Law on "The Defense of Ukraine."

The Supreme Soviet has reviewed and approved the Law on "Mobilization Preparations and Mobilization," which defined the principal directions of the activity of bodies of state and executive authority, local and regional self-government, enterprises, organizations and institutions regardless of the forms of ownership and departmental affiliations.

To raise mobilization readiness it would be expedient, in my opinion, to make some changes in, or repeal, the Edict of the Presidium of the Supreme Soviet of Ukraine of 27 August 1991 entitled "The Subordination of Military Commissariats on the Territory of Ukraine," which stipulates the subordination of the military commissariats to the corresponding local authorities. This edict was adopted when there were no armed forces of our own in Ukraine, but now it is disrupting the principle of sole command and vertical subordination.

The adoption of the statute on military-transport obligation in Ukraine should also be accelerated. Its absence is making markedly more difficult the activity of the Ministry of Defense in the realm of planning the withdrawal of vehicles from the national economy for the needs of the Armed Forces in times of threat to the state.

The Laws of Ukraine on "Universal Military Obligation and Military Service" and on "Social and Legal Protections for Servicemen and the Members of Their Families" have great significance for the development of defense and the assurance of military security. The realities of the present day are such that certain provisions of those laws require fundamental review in the future. The fighting ability of the army, the prestige of military service, the selflessness with which Ukrainian men devote themselves to their sacred military obligation to the Fatherland, the level of discipline etc. all depend, and will depend, on that.

The paramount tasks include the development of a state program for pre-draft training of the youth for service in

the army. The system of military-patriotic indoctrination should be based on a national-historic foundation and the traditions and merits of the people.

The prestige of servicemen must be raised to a higher level in service and in society. The main thing here is to break up the situation that has come to us as a legacy of the all-union army, and to cultivate among citizens the love and respect for the man in epaulets that were historically characteristic of the Ukrainian people.

The principal tasks of the leadership of the Armed Forces of Ukraine today include reducing the number of legal offenses and crimes among the troops, cases of the death or injury of personnel, and desertion. One way of educating the Ukrainian soldier is profound study of the state language, the history of Ukraine and its heroic past. Patience, consistency and persistence are required in this work.

The main problem, which requires the fastest possible solution, is housing. More than ten thousand officers and warrant officers in the Armed Forces of Ukraine are without apartments today. A program for the building of housing for servicemen has been developed, and the President has issued an edict on investment in this construction; the problem, in short, will be removed after a certain time. And the families of the military without apartments have had to bounce around others' rooms and dormitories for all these years, consoling themselves with the dream of their own housing. It is thus especially important that this dream become a reality.

Summing up the aforementioned, it must be pointed out that the current situation in the country as far as guaranteeing its military security, is not an easy one. One of the factors that has conditioned that situation is the state in which the Armed Forces of Ukraine find themselves. It is becoming more and more difficult to maintain their fighting ability at the required level. I will state with all authority, however, that our Armed Forces overall are a battleworthy organism solidly led by the Ministry of Defense and the Main Staff.

The leadership personnel of the Ministry of Defense and the Main Staff of the Armed Forces are attentively following the situation in the country and are making all necessary efforts so as not to permit a decline in the defensive might of the state, even despite the fact that defense here does not have material and legal support to the full extent, which is a defining condition for its effectiveness.

Ukraine has built its own host! December 6, when the Armed Forces of the independent state will mark their second anniversary, is not far off. Two years are not much for a child, but they are a significant interval of time for a young state and its army. However many problems we may have, however many difficulties still lie ahead, the Armed Forces of Ukraine will stand

confidently on guard for state sovereignty, and are ready to protect their freedom-loving people and the land of their forefathers.

BELARUS

Contract Service Draft Examined

WS2311112193 Minsk *VECHERNIY MINSK* in:
Russian 12 Nov 93 p 3

[Interview with Yuriy Korol, a leading staffing specialist at the General Headquarters of the Belarusian Armed Forces, by Aleksandr Makarov; place and date not given: "I Would Join the Contractors"]

[Text] The question of what the service on contract will be like has become very urgent lately. The Belarusian Defense Ministry crafted a draft on this kind of service three months ago. Our correspondent met with one of its authors, Yuriy Korol, a leading staffing specialist at the General Headquarters of the Belarusian Armed Forces.

[Makarov] What was the proposed draft based on? How is the regular service different from the contract one?

[Korol] Let me say this right away—our draft has not yet been approved. At present, it is being examined by the Cabinet of Ministers. As for the difference, service on contract will be voluntary. Contracted servicemen will have more freedom than those serving on a regular basis. They would be allowed to live outside the military unit. However, given present problems with housing, selection of contracted servicemen for the time being will depend on the place of residence. This means that one of the requirements for prospective candidates will be possession of their own housing. Wages will also be different. We have developed wage scales for contracted servicemen, who will be divided into nine classes. It is expected that the wage rate in the ninth class will be 4.6, which is a pretty good salary.

Soldiers and sergeants as well as officers and warrant officers who signed contracts will be able to take leave every day.

[Makarov] Lured by all those benefits, won't all young men, who are supposed to fulfill their military duty, rush to sign contracts and dodge regular service?

[Korol] Only those discharged to the reserve could be eligible for service on contract. Draftees should serve at least six months of regular service. After that, if they still wish to sign up, they will have to get positive evaluations from their supervisors. In the event of improper performance of duties, the unit command can dissolve a contract with servicemen with their subsequent transfer to regular service.

[Makarov] For how long could you sign the contract?

[Korol] For two years. Then, it could be extended for at least another two to six years. You could even reach retirement age that way.

[Makarov] Would women be able to sign up?

[Korol] Yes, if they are under 19 years of age and have no children. The last requirement is absolutely necessary because mothers must take care of their sons and daughters. Similar provisions are observed in the armies of other states. According to our draft, women will not be relieved of standing guard, as was the case before. They will also be given name-assigned [tabelnoye] weapons.

[Makarov] Would the contracted servicemen be entitled to enroll in military higher education institutions?

[Korol] Of course, they would. Moreover, they would have certain benefits in this. For them, only civilian institutions will be closed.

[Makarov] How many servicemen do you expect to sign contracts?

[Korol] It is hard to answer this question at this point. Most probably, the contracts will be signed initially with specialists having the most sought-after qualifications in the Army.

[Makarov] Is the contract service economically justified? Can our Republic afford it?

[Korol] Undoubtedly, creating a professional army is a very expensive undertaking. But think about losses incurred by the state when a young man is taken out of production for one year and a half while in the service. Did you count how many hundreds of thousands of rubles are being paid by the Defense Ministry to train military drivers in the OSTO [Defense Technical-Sports Organization], who are irretrievably lost for the Army after their transfer to the reserve? Would we not be better off hiring professionals who will conscientiously serve for years. I am sure this would be to the Republic's advantage.

BALTIC STATES

Lithuanian Armed Forces General Department Head Named

944K0119B Vilnius *LIETUVOS RYTAS* in *Lithuanian* 2 Oct 93 pp 1,3

[Article by Tomas Juknevičius: "New Appointments in the National Defense Establishment: Former Lithuanian CP Central Committee Member, and Lithuanian SSR People's Control Committee Chairman, Has Become Head of the General Department of the Armed Forces Staff"]

[Text] Some time ago Colonel S. Knezys, Lithuania's Armed Forces Chief of Staff, signed an order making Jonas Lukauskas, ex-member of the Lithuanian CP Central Committee and chairman of the Lithuanian SSR

People's Control Committee, head of the Staff's General Department. [Examination of the text indicates that this agency would be the equivalent of a directorate within the Staff. It should not be confused with a 'General Staff'—FBIS]

Next year, Mr. J. Lukauskas will reach the age of 60. A Lithuanian SSR party activist, he joined the ranks of the CPSU at the age of 28. From 1962 until 1968, he served as second and first secretary of the Lithuanian Komsomol in the city of Panevezys. In 1966 he graduated from the University of Vilnius, and in 1974 from the CPSU Central Committee Higher Party School. From 1968 until 1975, he worked at the Lithuanian CP Central Committee. Beginning in 1975, he was first secretary of the Lithuanian CP Siauliai City Committee. Beginning in 1976, he was member of the Lithuanian CP Central Committee Buro. In 1980 he became a deputy of the Lithuanian SSR Supreme Council. During the last Soviet years, Mr. J. Lukauskas headed the Lithuanian SSR People's Control Committee.

Jonas Lukauskas told LIETUVOS RYTAS that work in the national defense establishment would not be foreign to him. The "Lithuanian Soviet Encyclopedia" skipped an entire period of his life: From 1954 until 1957, J. Lukauskas received general military training at the Frunze military academy in Kiev, from which he graduated.

Having been an activist in the Communist Party nomenklatura for six years, he served in the regular Soviet Army. He completed his service as a company commander with the rank of captain. In the reserves, he continued to climb the stairs of the military hierarchy. In early February of 1988, J. Lukauskas was awarded the rank of colonel and, in the event of war, he would have commanded a regiment.

"I am delighted to return to national defense, for that was one of my greatest dreams," J. Lukauskas told LIETUVOS RYTAS, and added: "I am very happy to again be able to serve Lithuania."

Mr. J. Lukauskas (no military rank has as yet been conferred upon him) observed that one of his major functions currently is to look after staff employees: to prepare the paperwork for the awarding of ranks, and to deal with practical problems.

The head of the staff general department said that he is taking on the task of renovating the quarters that the Armed Forces staff will shortly occupy. "I want the officials to be able to devote themselves exclusively to national defense," said J. Lukauskas.

Prior to being chosen head of the staff general department, Mr. J. Lukauskas was occupied with questions relating to the withdrawal of the Russian Army, working in the military facilities' inspection department. This job greatly pleased Mr. J. Lukauskas, for it was directly concerned with the withdrawal of the Russian Army from Lithuania.

Mr. J. Lukauskas said that he was surprised and somewhat shocked to get a call from a LIETUVOS RYTAS reporter.

"I have suffered from the press, but I am not a coward," said J. Lukauskas.

Armed Forces Chief of Staff Colonel S. Knezys said that Minister A. Butkevicius had advised Mr. J. Lukauskas to apply to the staff. After a three month trial period, it was decided to hire Mr. J. Lukauskas for the post.

Colonel S. Knezys characterized J. Lukauskas as a citizen with organizational abilities who was longing for a job.

"I am not interested in patriotism or the past," said Colonel S. Knezys. "The important thing is that my subordinates be capable of doing their jobs."

S. Knezys also emphasized that while J. Lukauskas is taking over tertiary functions for the staff, he is quite capable of properly dealing with important documents, and is adept at administrative and financial work.

Kaitseliit Said to Maintain 'Black List' of Russian Former Servicemen

94UM0102A Moscow KRASNAYA ZVEZDA in Russian
30 Nov 93 p 3

[Article by KRASNAYA ZVEZDA correspondent Valeri Gromak: "Under the Kaitseliit Mantel: 'Black List' of Former Russian Military Personnel Compiled in Estonia"]

[Text] Tallin—It is reported in Estonia's press that the 2nd department of the Kaitseliit (the 2nd department is the Department for Intelligence and Counterintelligence—V.G.) has been compiling a "black list." It contains the names of former officials of the Communist Party, Soviet authorities, the militia, the KGB [State Security Committee] and administrative agencies. The list also includes the names of people whom Kaitseliit has accused of being hostile to it.

The chief of the Department for Intelligence and Counterintelligence of the Kaitseliit paramilitary formations, who issued the order to compile the list, has been removed from his post. This was announced at a press conference by Kaitseliit commander Johannes Kert. According to Kert the information compiled pertained mainly to former intelligence agents and retired military, and the public was provided with a rough, unrefined draft of the list. It was learned that the list began to be compiled in March and April of 1993, when the danger of civil war arose in Russia. "Such a war could have spread to Estonia, and we therefore wanted to learn what the former intelligence agents and retired military were engaged in," Kert stated at the press conference.

The commander noted that information on the "black list" was made public just prior to the election of local officials and described the action as "an attempt to draw Kaitseliit into politics."

And so, Kaitseliit found a scapegoat and fired the chief of intelligence and counterintelligence. But did the trailing of retired Russian military personnel cease after that? This question was not answered at the press conference.

CAUCASIAN STATES

Conscription Drive in Armenia Reported

Major General on Draft Details

944K0310G Yerevan HAYASTANI
HANRAPETUTYUN in Armenian 2 Nov 93 p 2

[Interview with Major General Artur Harutyunian, head of the Organizational and Conscription Department of the Armenian General Staff, by ARMENPRES correspondent Boris Kyufarian; date and place not specified]

[Excerpt] Regional boards for the fall conscription drive began their work in seven districts in the republic on 26 October. The boards are headed by Minister of State Vazgen Sargsyan. The new structures also include the deputy defense ministers of Armenia, the presidents of city and regional executive committees, the heads of internal affairs departments, the heads of military police, judges and military commissars. This work has only one goal: To realize the conscription with high standards within the timetable specified by presidential decree. Today is the last day for young men to present themselves to military commissariats.

As for the progress of the work, the ARMENPRES correspondent met with Maj. Gen. Artur Harutyunian, the head of the Organizational and Conscription Department of the General Staff of the Armenian Armed Forces, and asked him to outline the progress of preparations for this step.

The general said: "As is known, this drive was preceded by a conscription call for the officer corps. I am satisfied with the results. We announced a draft call in nine specialties, and we were able to meet our conscription goals by 100% in all specialties. It is good to see that the rate of volunteerism is high, which suggests a high level of understanding, awareness and patriotism with regard to the defense of the homeland."

[ARMENPRES] If it is not secret, in what military specialties were the officers selected?

[Harutyunian] To avoid any rumors, I am repeating this: The officers selected were comprised of men up to 45 years old and included artillery specialists, antiaircraft defense and communication engineers, motorized artillery specialists, tankists and reconnaissance specialists. The men selected were all first-category reserve officers.

[ARMENPRES] It is obviously much easier to deal with men who have breathed exhaust fumes than with 18 to 20-year-old boys.

[Harutyunian] Naturally. For that reason the results of previous conscription drives were carefully analyzed and the most visible flaws were identified. These included the failure to specify a definitive locale of service "in the name of [preserving the secrecy] of orders"; the poor work of some medical examination boards where one doctor was able to sign off on all procedures or to send a conscript to barracks without any medical examination; and, finally, the two-year interruption in the work of the central republican medical examination board as an oversight and arbitration body. Today its work has resumed.

Let us note that all technical problems have been solved. The military commissariats have been supplied with transportation means, gasoline and diesel fuel. The conscription centers have been prepared.

[ARMENPRES] Is it not possible that once again conscripts from Yerevan serve only in the capital and, say, those from Gumri only in their city?

[Harutyunian] That is categorically prohibited. Our contingent of conscripts cannot be used within the structures of the Ministry of the Interior or the State Administration for National Security [former KGB].

[ARMENPRES] The public is aware of many incidents of draft evasion on various pretexts. Just look at how many "entrepreneurial" young men are on the streets of Yerevan.

[Harutyunian] We have only one standard—health. Deferments are granted only in exceptional cases and to day students at higher educational institutions. Beginning on 2 November, military police units will be deployed at airports. No conscript will be allowed to leave the country without permission from military commissariats. We have also asked the government to raise the stipends of soldiers to the minimum wage level defined for the republic.

[ARMENPRES] There are no military schools in Armenia. That could have an immediate impact on the army's ability to replace military cadres.

[Harutyunian] That problem is understood in principle by the Council of Ministers. A plan to establish a multiprofile training institution has been submitted to the council. At the moment we have 70 cadets studying in Russia and Belarus and 7 in Greece on the basis of contracts. We also have three people studying at military academies in Moscow. [passage omitted]

New Law on Conscription Viewed

944K0310F Yerevan AZG in Armenian 3 Nov 93 p 1

[Article by H. P.: "Draft Boards Can Waive Military Service"]

[Text] The Law "On Military Obligation" that was passed in December 1991 was criticized from all sides in the last few months. The said law created wide opportunities for evasion of military service, and as such had become a serious hurdle to the formation and development of a national army. From that standpoint, the changes in and the complementary provisions of the Law "On Military Obligation," passed by the Armenian Supreme Council on 1 November, introduce significant clarifications. Thus, the concept of "alternatives" has been removed from the list of military services. The "ceiling" for conscription age has been raised from 25 to 27. The law also opens the way for foreign citizens who offer their services to the Armenian army on a contractual basis. The board that takes the "military pledge" has been turned from a symbolic body into a disciplinary one: "[Conscripts] who renege on their pledge will be punished in accordance with the laws of the Armenian Republic."

However, the most serious changes have been introduced in the section on "Exemption from Military Term Service." The eight different reasons originally specified by the law have been replaced by the laconic statement: "Exemption from military term service is granted to those conscripts who are deemed by draft boards to be unfit for military service." One can presume from that statement that the number of severely frail and sick 18 to 27-year-old young men in the republic will increase sharply in the coming months.

On the other hand, the sections on deferment of military service have grown considerably. The first of these sections defines the six family circumstances under which deferment may be granted: Families in which neither the father nor the mother can work and which do not have any other children who can work; young men who are raising one or more children without a mother; those who have two or more children and whose wives are handicapped; and so forth.

Let us add that, as before, deferment of military service is granted only to students of state higher educational institutions. This provision will be in effect until the authorities decide when they will accredit the so-called "cooperative" higher educational institutions. The changes in the law will apply to these institutions as soon as they are accredited. This should not take long, especially given that the fall conscription drive has already begun. This is important in view of the following provision in the modified law: "The conscripts who do not present themselves to the appropriate military commissariat within five days of the deadline set by the draft call for military term service will be considered draft evaders and will be held responsible in accordance with procedures defined by law."

Source of Weapons in Conflict Areas

94U M00964 Moscow NOVAYA YEZHEDNEVNAYA GAZETA in Russian 10 Nov 93 p 3

[Unattributed article from NEG service: "Where Are the Weapons in the Regions of Armed Conflicts Coming From"]

[Text] For five years now in Transcaucasia, interethnic and civil wars have been dying down or flaring up anew. The tally of dead and wounded rises from day to day. In just the first 100 days of the war in Abkhazia, according to estimates by military experts, over 1,000 have died and more than 3,500 have been wounded on both sides. The human losses in the years of the military conflagration in Transcaucasia are practically inestimable. And only recently did a group of independent military experts attempt to make at least some estimates, having examined the whole dynamics of the military conflicts in the region. The result was horrible: Over the last five years, all sides participating in the military confrontations lost more than 100,000 killed and about 40,000 wounded. Approximately 2,000 people are missing. This is almost seven times what the USSR lost in the years of the war in Afghanistan.

The losses among Soviet (and subsequently Russian) servicemen during this period are approaching 1,500 (about 500 killed and 1,000 wounded). Approximately 100 Russian servicemen and members of their families were killed just in the territory of Georgia in 1992 alone. And today the count of losses is continuing.

No sane person who is an observer of the military conflagration in Transcaucasia can fail to ask himself the question: Where did so many weapons come from in this region? Why is there no decrease in the number of tanks, artillery guns, and missile launchers? Where, finally, are the combatant sides finding fuel and lubricants and spare parts for military equipment? After all, there are no incombustible tanks and guns, no bottomless depots with ammunition, or terminals with gasoline and lubricants.

Fortunately, it is not just observers on the sides who are asking themselves these questions but also specialists. This, for example, is what Colonel Vladimir Petrovskiy, an expert from the General Staff of the Russian Armed Forces, says about the history of this arsenal of weapons.

—It was the adventurist abolition of the USSR that contributed to the flare-up of the gigantic conflagration in Transcaucasia. Only I will make the reservation right away that I am not red-brown and I am not a democrat. I am speaking above all as a military man. Moreover, I readily admit that the "breaking up" of the USSR was an objective necessity for the good not only of Russia but also of the republics that fervently desired to become independent. But I will never agree with the means that three politicians employed in abolishing the Soviet Union. And the most horrible thing, in my view, was that Yeltsin did not consult with our military people about the possible consequences of the division of the country and its armed forces. The conference in Belovezhskaya Forest was prepared in the strictest secrecy. Nevertheless, thanks to our "grushniki," we in the Ministry of Defense and General Staff were able to find out that the "burial" of the USSR was to be announced. My colleagues in the General Staff department who observed the southern sector were perplexed.

What would happen in Transcaucasia? They began to seek access to Marshal of Aviation Yevgeniy Shaposhnikov, Minister of Defense of the USSR. The intention was simple: Convince Yevgeniy Ivanovich that he urgently had to speak with Yeltsin about military questions in regard to the division of the USSR. And before announcing the closing of the Union, work out in detail with the republics all questions with respect to the division of arms, equipment, and munitions. Even then, many experts and analysts of the General Staff gave an elementary forecast of the horrible future awaiting the Caucasus if Russia did not concern itself with the control of arms in time. For the sake of objectivity, it must be acknowledged that at that time in the General Staff there were basically three clearly expressed points of view on the resolution of the problem of weapons and munitions in the Caucasus.

The first way to proceed at once to withdraw weapons and munitions from the region. The second was to leave to the republics the necessary minimum amount of equipment and arms (preferably not the very best) and to remove the rest and stockpile it in Russia and various regions of the Northern Caucasus; or, replace what is obsolete with something more up to date while being oriented toward the rigid quotas foreseen by the Conventional Arms Reduction Treaty. The third proposal was that we urgently remove the maximum possible quantity of munitions from Transcaucasia in order to reduce the explosive potential of the Transcaucasian powder keg.

Unfortunately, Shaposhnikov did not then assign the necessary importance to the proposals of the General Staff, probably because he himself did not believe that the momentum to divide the USSR would accelerate so rapidly. In my view, there was also a second reason. Shaposhnikov was very much afraid of ruining Yeltsin's frame of mind with some "trivialities" at the moment when Boris Nikolayevich was already dreaming of the dissolution of the "empire." And possibly Shaposhnikov also dismissed our considerations because at that time his relations with General of the Army Vladimir Nikolayevich Lobov, chief of the General Staff, were very strained and the minister simply ignored many documents and proposals from his subordinates.

All of this represents the political background of the problem. To get closer to the truth, however, it is extremely important to have a specific notion of how and why the overwhelming mass of arms and combat equipment, military bases, and arsenals in Transcaucasia got involved in the military-strategic situation of Transcaucasia.

Here is some data from Colonel Vladimir Simonov, a military analyst with the Ministry of Defense of Russia and a specialist on Transcaucasia.

Per capita (16 million people) and per unit of area (186,000 square km) Transcaucasia is one of the most militarized regions not only of the former USSR but also of the entire world. In a band 300 km wide and extending

700 km, an infrastructure and supplies were established for two districts—the Transcaucasian Military District and the Transcaucasian Border District—plus the 19th Independent Air Defense Army, the 34th Air Army, the Caspian Fleet, a brigade of ships of the Black Sea Fleet, and a large collection of units subordinate to the center. The power of the Transcaucasian grouping was such that if it were fully deployed it could autonomously carry on full-scale combat operations in the Southern Strategic Sector for a month.

How was the military potential distributed in the territory of the republics of Transcaucasia? Today, for the first time we can publish the real distribution of forces.

Azerbaijan gained the most, because more forces of the former Soviet Army were deployed there than in Georgia and Armenia. It considerably exceeded its sister republics in terms of the quantity of heavy arms, combat aircraft, helicopters, munitions depots, spare parts, and reserves of fuel and lubricants. For example, there were approximately 15% more heavy arms (tanks, infantry fighting vehicles, armored personnel carriers, artillery, and armored vehicle bridgelayers) in Azerbaijan than in Armenia and 27% more than in Georgia.

In particular, the 4th Army in Azerbaijan had 1,310 units of heavy arms, the 7th Army in Armenia had 1,107, and the 31st Army Corps in Georgia had 955. Approximately the same relationship also existed with respect to the quantity of firearms (assault rifles, machine guns, grenade launchers, carbines, sniper rifles, and so on). It is sufficient to say that just in former Soviet units (which later became Russian) in the territory of Azerbaijan there were about 100,000 firearms and about 2 or 3 times that many in weapons arsenals in the event of the mobilization of reserves in the threat or start of war. According to the estimates of some military analysts, this quantity of firearms would be sufficient for Azerbaijan to arm about 20 motorized rifle or land divisions, as people are still accustomed to saying.

Even more impressive was Azerbaijan's advantage in terms of reserves of munitions. It had more than Armenia and Georgia together. In its territory was one strategic, two district, and three division depots of munitions. According to a Ministry of Defense specialist, there were more than 7,200 carloads of munitions at the strategic depot in Kilyazi, about 1,100 carloads at each of three division depots in the districts of Agdam and Nasosnyy, and 150-200 each at Gyuzdek, Gyandzha, Lenkoran, and Nakhichevan. Altogether, there were more than 11,000 carloads.

To get an idea of what is behind these figures, it must be noted that 1,000 carloads are enough for the Azerbaijani Army to carry on intensive combat operations for a year. And if one now takes the entire sum of munitions and calculate how long it would last the Azerbaijanis, the result is that their army will not experience a need for munitions for at least 9-10 years.

And what quantity of munitions did Georgia have? There were two district and three division depots in its territory with a total volume of more than 2,000 carloads of munitions (650 at the district depot in Akhaltsikhe, 800 at the district depot in Khashchuri, and 200 at each at three division depots). This is one-fifth what they had in Azerbaijan. But even so, if you take into account the size of the Georgian Army (about 80,000 men, according to some data), these reserves of munitions are enough to last this republic at least another 5-6 years, even taking into consideration what has already been expended. At that time, there were so many firearms in the territory of Georgia that it would have been enough to arm 3% of the adult population of the republic.

Armenia was in the least favorable position in comparison with the other Transcaucasian republics. In its territory were just three division munitions depots with a total value of about 500 carloads of munitions; that is, about one-twentieth what Azerbaijan had. And if the war between Azerbaijan and Armenia continues with the same intensity, then most likely by mid-1994 the Armenian Army will not have anything with which to fire at or bomb the "enemy."

The extraordinary incident at the division depot in Balaovit was a heavy blow to the already meager arsenals. Five out of eight depositories there exploded. And this amounts to about 160 carloads of munitions. The Armenian side then considered that this was "sabotage by the Russians" and presented Russia a claim amounting to 1.7 billion rubles. The leadership of the republic demanded that the Russian Federation bring into Armenia a quantity of munitions equal to what was destroyed. Since the guilt of Russia in the explosion in Balaovit was not proven, of course, the Russian leadership did not consider such a demand to be legitimate. But to avoid friction and acts of violence against our forces in Armenia, a considerable quantity of munitions was replaced for this republic.

By the way, it must be acknowledged that according to information leaked from competent sources at that time, in the Ministry of Defense and among the higher officers in the General Staff they also viewed possible actions against depositories and depots as one of the ways to weaken the total TNT equivalent of Transcaucasia but with a very severe condition—that not a single person would suffer. Were the explosions in Balaovit the work of our special forces and "grushniki"? Only the wind knows this, as they say.

Let us now summarize the results. As a result of the nationalization of the military equipment and property, after the abolition of the USSR the republics of Transcaucasia received a total of about 3,500 units of heavy armament, more than 260,000 firearms, and more than 17,000 carloads of munitions. We are not even talking about air-launched munitions. Several basic loads were stockpiled at each airfield for aviation units deployed there. (Five each in Georgia and Azerbaijan, whereas Soviet combat aviation was not based in Armenia)

According to the crudest estimates, this was a total of 15-20,000 bombs, which are now used "as intended."

It must be stressed that even before the signing of the intergovernmental agreements on the transfer of the arms of the former Soviet units to the national armies of the republics of Transcaucasia, this transfer was already proceeding at full speed. Covert agent intelligence of the military department of Abkhazia found out that the Ministry of Defense of Russia is transferring heavy combat equipment to Georgia. Protests were immediately sent to Yeltsin, Grachev, and Kozyrev. The facts were most convincing. The minister of defense of the Russian Federation, General of the Army Pavel Grachev, was pressed to the wall, as they say, and openly admitted (the following is from an official document)

"Yes, we transferred a minute quantity of heavy arms to Georgia. The transfer process had just begun.... I have now terminated this process because armed clashes have occurred. But when the situation calms down and stabilizes, the transfer of weapons—which is official and legal—will resume."

And here are the words from still another statement from the minister of defense of Russia: **"We do not have the right to transfer weapons to Abkhazia over the head of the Government of Abkhazia, because Abkhazia is considered an integral part of this state."** That is all so. But there is just one thing that no one can understand: Where did the Abkhazians get the dozens of tanks, artillery systems, and missiles with which they drove units of the Georgian Army even as far as Sukhumi? Not all of this was captured from the Russian units deployed in the territory of the republic. After all, something was delivered "officially and legally." And these arms are not of American but Soviet production.

Even today the position of Russia in Georgia seems quite strange, when in essence a civil war is raging there. Once again Russian tanks and other combat equipment are being sent there to aid the government forces. Only a strange thing is happening: The head of the Georgian state declares publicly that his army is receiving the latest Russian armament, whereas the Russian military leadership categorically denies this. But it was ascertained rather precisely that there were eight Russian tanks in the first batch. But the main thing is not even that, but the fact that again the Russian weapons are being used to establish order in a foreign country.

But there is still another side to the problem

According to the estimates of some military specialists, only a little over 60% of the arms of the units of the former Soviet Army deployed in Transcaucasia were transferred to the national armies of this region in accordance with the achieved agreements. Approximately 30% of the weapons (especially firearms—assault rifles, pistols, carbines, and machine guns) went to national armed and mafia formations as a result of the violent seizure of arsenals, weapons depots, and bases of

military units of the Russian Army. According to unofficial information of competent agencies, in real terms this amounts to about 60-70,000 weapons, whereby many military experts think that these figures are too low, because in the initial period of "privatization" of Russian weapons it frequently was almost impossible to determine where it was going—to legal units of the national army or to armed formations of an antigovernment persuasion.

Let us present some data from a report by Colonel of Justice Viktor Kruk, an officer of the main directorate of the Procurator's Office of the Russian Federation for the supervision of the observance of the laws in the Armed Forces of the Russian Federation:

"With the connivance and often sanction of the administrative agencies of Georgia and local authorities, there has been an increase in the frequency and boldness of the armed seizure of military installations, depots, arsenals, and loads of combat equipment and other armament of the Russian forces. We also have similar information about Azerbaijan and Armenia.

"We have information that depots in Akhaltsikhe and also depots of the 34th Air Army in Tbilisi were seized under direct orders of the minister of defense of the republic." (The military jurist reported this information in mid-1993—the editor).

"In 1991 in Georgia alone, there were about 30 registered cases of unprovoked armed attacks against Russian units and arsenals. In 1992, their number almost doubled. And only in 1993 did the number of attacks against depots and bases with weapons and munitions decline—there was almost nothing left to seize."

In 1991 alone, as a result of armed attacks against our facilities in Georgia, more than 125,000 firearms were illegally seized along with more than 300,000 grenades, tens of millions of cartridges, hundreds of motor vehicles, armored equipment, and heavy armament. The material loss inflicted on the Russian Army amounts to billions of rubles and is not subject to precise calculation. This statistic declined only slightly in 1992. It would seem that Georgia has armed itself to the teeth. Why then did Shevardnadze recently ask for more military assistance? The fact is that almost 70% of the arms and combat equipment broke down prematurely as a result of incompetent operation.

The ease with which Russian arms were seized in Transcaucasia began to raise serious suspicions among Russian military counterintelligence specialists. They pointed out that in many cases our commanders too openly demonstrated negligence in organizing the guarding of the weapons and equipment.

This is what Major Aleksandr Timofeyev, an officer of the reconnaissance section of the former 19th Independent Air Defense Army, recalls:

At the end of December of last year, Georgian special forces seized the 7th Battalion of the 144th Antiaircraft Missile Brigade without any particular effort. Only two officers remained in the battalion, and this is despite the fact that Moscow had strictly demanded that the weapons and equipment be observed at all times and that their strengthened guard and defense be organized. Only later did my colleagues frankly tell me that they were playing a losing game....

The officers of the 19th Independent Air Defense Army covered Moscow with hundreds of letters complaining of the open and sanctioned pillage of their strategic formation. But Moscow demonstrated surprising calm. The Army was completely plundered.

There are reasons for the fact that hundreds and thousands of units of Russian weapons in Transcaucasia easily fell to those who wanted them. And perhaps one of the main reasons is that our military and political leadership seemingly is exchanging the semi-voluntary surrender of arms for guarantees of loyalty toward Russians in Transcaucasia. Certainly the Russian units in this region had more than adequate forces and means to repulse any attempts at aggression against depots and arsenals. True, it is worth remembering that our units frequently found themselves in conditions in which they were forced to surrender weapons without a fight. Commanders fulfilled any conditions of militants to save the lives of soldiers, officers, and family members of servicemen who had been taken hostage. For one of these reasons, for example, an antiaircraft missile regiment in Gudauta was disarmed and plundered. Armed individuals from among the local inhabitants took 984 assault rifles, 267 pistols, 18 hand machine guns, 600 signal flares, more than 500 grenades, and over 500,000 cartridges of different calibers.

After the orgy of plundering in Transcaucasia had become a mass phenomenon, a large gold mine opened up for Russian servicemen with unclean hands. Some military observers were forced to admit that it was not possible to ascertain for precisely what sum of money or what reward Russian commanders turned arms over to local inhabitants or authorities. It is no accident that the phrase "turned over illegally" frequently figured in the materials of the investigations.

From the materials of the procurator's investigation of the case of Lieutenant Colonel A. Dolgoplov, commander of an independent battalion for technical support of airfields:

"It was revealed in the course of the investigation that Lt. Col. A. Dolgoplov, commander of an independent battalion for technical support of airfields, illegally turned over to local authorities in Gadauta 6 infantry fighting vehicles with a full basic load, 6 machine guns, 367 F-1 grenades, and about 50,000 cartridges of different calibers."

About 100 such cases of the illegal transfer of weapons and equipment have been ascertained in the last 3 years.

And one last thing. Transcaucasia has become a gigantic Klondike for gangs and mafia formations of all nationalities of the former USSR. According to competent agencies, one of the most significant "caravan routes" for the circulation of weapons to as well as from the Caucasus passes through this region. Today there is practically no city in Russia (indeed in the territory of the former USSR in general) in which there would not be weapons that have "arrived" from the republics of Transcaucasia. Assault rifles, pistols, machine guns, grenade launchers, and mines with the corresponding numbers and markings testifying to their "Transcaucasian" origin are roaming about Russia from St. Petersburg to Vladivostok. Information is already leaking out indicating that throughout the expanse of the former USSR

there are entire syndicates in operation for the purchase, sale, and delivery of weapons. Colleagues in competent agencies note that whereas weapons are most often taken out of Azerbaijan, they are brought into Georgia and Armenia.

At the same time, reports are leaking out that a number of representatives of the ministries of defense of the republics of Transcaucasia have already shown interest in the purchase of arms from Turkey, Iran, Iraq, Germany, and France. And this means that the military aspects of the political situation in Transcaucasia will take on more and more "internationalized" tones. No end to the military conflagration in the Caucasus is in sight.

DEFENSE INDUSTRY

MAPO General Director Kuzmin on Future, Mig-29

94UM0079B Moscow KRASNAYA ZVEZDA
in Russian 6 Nov 93 p 4

[Comments by Vladimir Kuzmin, general director of MAPO as reported by KRASNAYA ZVEZDA correspondent Valentin Rudenko: "Hard to Live Without 'Grandfather,' But Possible": "Just One Question"; first two paragraphs are KRASNAYA ZVEZDA introduction]

[Text] The expression "We can't go on living like this!" resounding from television screens and newspapers has already become a truism. But we can repeat it a million times and things will hardly change for the better until we understand HOW CAN WE LIVE? It was this, perhaps largely rhetorical question, which we decided to use to open the new heading in the "Defense Complex" page. General directors, engineers and blue-collar workers, all those whose mind and labor create the most up-to-date weapons systems and combat equipment, will express their views on the most vital problems of the defense sector.

We asked the General Director of the Moscow Aviation Production Association [MAPO] Vladimir Kuzmin to respond to the first question under this heading. Today, when the defense sector is experiencing a complex and very dramatic period in its history, the association feels quite confident in the raging sea of Russian economics.

How can we live? Vladimir Vasilevich asked again. Do you think there are ready-made prescriptions for this? Everyone has to decide for themselves.

Several years ago when we realized that the reduction in the Armed Forces was for real and for the long term, without waiting for orders from above we set a course toward production of conversion goods. First of all, of course, civilian planes. Today in the association's assembly shop, along with the MiG-29 fighters you can see Il-114 aircraft for local airlines, the multipurpose 9-passenger T-101 "Grach," and "Aviatika" ultralights.

But while we were working on conversion programs, we didn't forget about our main work either, combat aircraft. Despite the sharp, not to say crashing reduction in defense orders, significant capacities continue to work at producing the MiG-29. We have high hopes in this plane, including in the context of entering the world aviation market.

It's no great revelation if I say that under present conditions, when the internal market has been cut many times over, for many enterprises the export of their products has been a kind of magic wand, and at times the only possibility to survive, preserve the collective, and

the capacity to create the most complex weapons systems. But as you know, no one is waiting for us in the world market with open arms.

Our association has a lot of experience in aviation technical cooperation. In three decades we have delivered more than 3,000 MiG-21, MiG-23, and MiG-29 fighters to 42 countries of the world. We were among the first, and in the aviation industry the very first to receive the right, naturally under state supervision, to independently conduct negotiations and sign contracts, i.e. to sell combat fighters abroad. In order to better and more professionally exercise this right, we created a special foreign-trade structure at the association. There have already been definite results. This year MAPO signed a contract and began delivering one lot of MiG-29s to Hungary. Talks on the sale of planes to Malaysia are in their final stage.

The life of a plane runs to 20 to 25 years. In that time the onboard equipment and the weapons systems will age, but if they are replaced by new ones on the MiG-21 and MiG-23, for example, the same ones being installed on fourth-generation aircraft, the fighters gain a second wind, so to speak, they become comparable with modern aviation systems in terms of their combat capabilities. We are prepared to do such modernization quickly and relatively cheaply.

We also have specific proposals regarding modernization of the MiG-29. In particular, installation of navigational equipment on them which is accepted in the West, increasing the fight range to 3,000 km and the bomb load from 2 to 4 tonnes, the new operating modes of the radar complex, and the use of more sophisticated missiles which make it possible to operate not only against air targets, but ground targets as well. As a result of such modernization, the fighter essentially acquires the qualities of a ground-attack plane.

I think that new approaches to service maintenance and modernization of MiGs interests our foreign partners. So that they learn more about our capabilities, we are now actively involved in advertising our defense and conversion products. The international aerospace shows and exhibitions offer excellent opportunities for this. This year, for example, at Le Bourget and Ankara we were able to obtain a number of interesting proposals for the export of our planes and service maintenance, and to establish new contacts with possible buyers. We hope that the air show in the United Arab Emirates, "Dubai-93," to which we are sending our delegation, will also bring great benefit.

While devoting such great attention to questions of bringing our products to the world market, we are not forgetting the needs of our own army. Unfortunately, the Russian Air Forces today cannot renew their aircraft inventory in adequate quantities, but another there is an urgent need to do so. It is no secret that a large number of recently produced MiG-29 fighters were left in the so-called neighboring foreign countries after the breakup

of the USSR. Under these conditions, we proposed a solution: Take some number of planes from the units, modernize them and sell them to foreign buyers, and in their place send the latest-modification MiG-29s to the units. You understand, we are talking about those countries which would like to buy our fighters, but lack sufficient resources for that purpose. If we manage to implement this idea, we'll kill not two, but even three birds with one stone, as they say: We fully utilize our production capacity, renew the inventory of fighters for the Air Forces, and also earn some hard currency.

Speaking about our prospects, we intend to keep on actively working not only on conversion but also on military programs. It would be an unforgivable error to lose the unique experience in this sphere, accumulated by the association over many decades. In order that this not happen, even now we are working to prepare the plant for serial production of new planes, such as the multipurpose MiG-29M fighter, for example. Although the plane has kept the name of its predecessors, in terms of the technologies used in it, and its combat capabilities, it is already a fundamentally new aircraft. According to the assessments of specialists, the MiG-29M has a number of indisputable advantages over its foreign analogues, including the F-16C, F-18, "Mirage-2000," "Raphael" as well as the Eurofighter now in development.

That is how we live. From outside one often notices our successes, but our deficiencies and omissions are more obvious to us. We do have them, I must admit. Not everything happens as we would like. Nostalgia for the old days, when there was no need to think about how to ensure the delivery of components, where to get the money to raise the wages of personnel, where to sell our products, etc., acts as a kind of brake. But the sooner we realize that the days are gone when we could count on our kindly grandfather, the better our chances of preserving our collectives, and preserving the capacity to produce unique combat equipment and weapons system.

Privatization of 'Arsenal' Plant

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[Article by Aleksandr Bekker: "Largest Enterprise of the Military-Industrial Complex No Longer State-Owned": "'Arsenal' Plant Allowed to Form Joint-Stock Company"]

[Text] St. Petersburg is the unconditional privatization leader. Of its 6,106 small enterprises, almost 5,000 have changed owner. This was where they first initiated check auctions, and where the mechanism of investment organizations was first broken in. But just a year ago, no one would have believed it possible to turn the "Arsenal" state association into a joint-stock company without going shares with the state. Built under Peter I to make

cannons, since the 1970's the plant has produced space technology for military purposes, and for that reason was tightly classified.

The prestigious products also dragged down the 12,000-strong collective. With the start of reforms, utilization of capacity from defense orders dropped to 70%. There was no point in counting on the budget: Conversion credits only postponed the inevitable. But forming a joint-stock company to acquire outside capital was not possible either, since the government had put "Arsenal" on list No 1—which consisted of enterprises of the military-industrial complex prohibited from privatizing. An original way out of the impasse was found. Four subdivisions of the association were picked out which had independent production cycles not officially associated with the "company" production. Joint-stock corporations were formed on their basis: For production of tools, compressor stations, and consumer products, and also a commercial center with transportation, warehouses, and a supply service. It should be noted that they formed joint-stock companies in accordance with variant 3, i.e. based on a contract with the labor collectives, the leadership received 20% of the stock in hand, with the obligation to restructure the enterprises and attract investments. Another 50% of the stock goes for free sale. This variant, immediately creating an owner in the form of the plant management, is as progressive as it is rare. In the entire country only 112 enterprises, less than 2% of those forming joint-stock companies, have taken this risk.

The "Arsenal" joint-stock corporation passed through the check auctions and became "free." That is when the General Director of "Arsenal," Vyacheslav Petrov, asked a "sly" question of Moscow: These were related enterprises on the same territory, but with different forms of ownership. The defense plant should form a joint-stock company too. And on the basis of "Arsenal," to attract investments it was proposed that a "soft" holding company be created, i.e. each of the newly-formed joint-stock corporations would invest 20% of their stock in it.

Goskomimushchestvo [State Committee for Control of Property] supported this scheme, while the Defense Ministry and Roskomoborprom [Russian Committee for the Defense Industry] tended toward the variant of a "hard" holding company, to which they and the enterprises of the military-industrial complex were accustomed, in which a controlling share, 51% of the stock, was assigned to state ownership for three years. The persistence of the "Arsenalites" was already tipping the scales in their favor when the trade-union leader of the association, Mr. Prostov, pelted the state with telegrams about the illegality of the privatization. However, a commission appointed by the first Vice-Premier Soskovets, with the involvement of all interested departments, could find no violations. It appeared that the way was clear for formation of a joint-stock company from the defense plant, but in August Boris Yeltsin by his

Order No 1267 halted the privatization of enterprises of the military industrial complex for three months in order to select 474 out of the 1700 to remain under state ownership. Again a tense pause ensued, and finally on 1 September a government decree was issued, allowing formation of a joint-stock company from the "Arsenal" defense plant in accordance with variant 3, and the creation of a holding company in accordance with the scheme which it had proposed.

A question was posed by a SEGODNYA correspondent: "Isn't the holding company a veiled form of a state association, in which they will again begin pumping out profits from a potentially strong joint-stock corporation producing consumer goods [and send them] to an energy-intensive and underutilized defense plant?" In response, an "Arsenal" spokesman said that the managers of the nine joint-stock companies would join the board of directors as equals, and that the commercial interests of each would be an impediment to the former dictatorial policy. At the plant there is no fear that interests and the struggle for investments may sooner or later split the holding company and separate the strong from it. The deputy chairman of the Municipal Committee for Control of Property, Grigoriy Tomchin, who proposed the scheme for the privatization of "Arsenal," assured us that this would not happen, since the plant had already passed through the stage of argument and determination of positions.

Thus, the holding company will begin attracting investors. Eighty projects have already been worked out with foreign partners, but only the most profitable, in the estimate of the board of directors, will be financed. These include the production of equipment for Sweden and Germany (in accordance with their technology) for the light and food industry. Production of refrigerated containers, with a capacity of 1000 tonnes, has been started at the order of the Finnish Company "Penti Porka."

In thinking over a program of survival, at "Arsenal" they decided that the shares transferred to the holding company would be offered as a single large package to investment organizations. "And so as not to miss a buyer," the director of one of the joint-stock corporations, Vitaliy Sychev, told us, "we are selecting a reliable partner ahead of time from among the national and foreign companies showing an interest in us."

Kokoshin on State Defense Procurement

PM2411155093 Moscow ROSSIYSKIYE VESTI
in Russian 24 Nov 93 pp 1-2

[Interview with Andrey Kokoshin, Russian first deputy minister of defense, by Roman Zadunayskiy; place and date not given: "Presidential Edict Will Support Defense Order"]

[Text] For the first time, the military doctrine provisions published in ROSSIYSKIYE VESTI recently devote a special section to questions of the development of the

country's defense industry potential. Our correspondent discusses defense industry problems and military-technical and military-economic policy with Andrey Kokoshin, Russian first deputy defense minister.

[Zadunayskiy] Andrey Afansyevich, what is the reason for the state leadership's increased attention to the state of affairs in the defense industry?

[Kokoshin] A very difficult and sometimes desperately acute situation is developing at enterprises involved in meeting the state defense order. In 1992 the state defense order was cut by 65-67%. The result was a sharp reduction in the inflow of new equipment into the Armed Forces. These reductions compelled the Defense Ministry and the branches of the Armed Forces to conduct yet another detailed review of the product list, sharply reducing it and also consolidating scientific research and experimental design projects. It has involved colossal effort, but enterprises have been through a reduction in the order of a magnitude unparalleled in any country in the world. But ongoing inflation, the profound crisis in reciprocal defaulting on payments in the economy as a whole, and the constant lag between the allocation of Defense Ministry funds to pay for the defense order and the rate of inflation has again made the situation very complex. To this you have to add the fact that stocks of materials and components available by [the beginning of] 1993 were exhausted by mid-1993 and wage levels at defense production facilities are 40% lower than in machine building as a whole. In many instances the defense order has ceased to be cost-effective or profitable, whereas previously it conferred prestige and provided definite economic advantages and substantial social benefits.

In terms of the defense industry in general it can be said that in the past year and a half the pendulum has swung completely—whereas the country used to "go hungry" for the sake of arms production, nowadays many arms producers find themselves in virtually the worst situation compared to other producers.

The task is to finally achieve a modus operandi ensuring both the requirements of Russia's Armed Forces and also the interests of arms producers. It is particularly important to retain skilled cadres of scientists, designers, engineers, and workers—first and foremost those who ensure the development [sozdaniye] and production of the most complex high-precision items. The edict signed by the president "On the Stabilization of the Economic Situation of Defense Industry Enterprises and Organizations and Measures To Ensure the State Defense Order" could be an important point of departure for such an optimum modus operandi.

[Zadunayskiy] The edict talks about the need to review conversion programs on the basis of their economic effectiveness. Are we talking about the possibility of selective financing of the most cost-effective production facilities?

[Kokoshin] In many instances in 1992 the allocation of conversion funds went into ensuring social protection for the collectives of enterprises which had suddenly lost defense orders so that the enterprises could "keep afloat." Many conversion programs subjected to substantial reworking—by the Ministry of Economics and the State Committee for Defense Sectors of Industry, for example—require time and considerable effort. There are known to be a considerable number of enterprises where invested money has started to be recouped, but there are also enterprises where the money goes almost totally to "stopping their pants falling down," as the saying goes. Many people are raising the question of ensuring greater effectiveness from conversion programs. This will require the adoption of a number of measures. In particular, in my view, money earmarked for conversion projects should be allocated to a greater extent to a specific procurement authority—the recipient of the end product.

A highly acute situation has developed in our country in the field of transportation, communications, the power industry, and the efficient utilization of energy. In many developed countries the state takes direct or indirect responsibility for infrastructure development work. And for the most part defense enterprises are primarily adapted for resolving this kind of task of statewide significance. The Armed Forces too have a vital interest in the development of Russia's general-use infrastructure.

For the past two months we in the Defense Ministry—enlisting a number of our academics, directors of leading enterprises meeting state orders, general designers, and military representatives—have carried out an analysis of the results of Armed Forces activity in the new economic conditions.

In particular we consider it important to organize a stable system of state funding of the activity of the Armed Forces and enterprises meeting state orders in conjunction with a more focused structural restructuring of industrial enterprises, including by placing in a special category specifically defense-related production facilities at relevant enterprises.

I recently visited the Omsk transport machine building plant. There you can see not only unsold tanks which the Ministry of Foreign Economic Relations once planned to export, but also large quantities of unused machines for... washing bottles. It was given this as a conversion "target," but there are just no buyers. I would like to stress yet again that a market-driven mechanism for the implementation of conversion programs must make primary provision for stimulating the market and stimulating demand, including by ensuring the solvency of the state procurement authority, which in turn gears its work to the mass consumer—passengers, for example, telephone subscribers, entrepreneurs engaged in supplying commodities, and so forth. This is one of the most

important conditions for ensuring the effective utilization of funds invested in conversion. But this is no panacea, either. A package of other measures also needs to be envisaged.

[Zadunayskiy] Is it possible to talk about tightening control over the financing of conversion programs?

[Kokoshin] The president's edict makes the most direct provision for this. The Ministry of Economics, the State Committee for Defense Sectors of Industry, and the Ministry of Finance have the main role here. The Defense Ministry does not have a leading role in the process of formulating and implementing conversion programs, but it does have a vital interest in ensuring that enterprises produce certain high-tech products and retain their technological level and skilled personnel, that funds are utilized efficiently, and that conversion is tied in with the state defense order and the implementation of the long-term arms program.

[Zadunayskiy] How far is the 1993 defense order being fulfilled?

[Kokoshin] What was ordered is, for the most part, being supplied. This applies in particular to armored equipment, artillery armament, ammunition, and air defense missile systems, orders which were in the main fulfilled in the first nine months of this year. Matters are not so good with the more complex equipment, where a larger number of suppliers are involved and production sharing extends to 1,000 or more enterprises. In these production areas, because of the chronic failure of the funds allocated by the Defense Ministry for financing the defense order to keep pace with the real increase in prices, there has been nonfulfillment of the plan for the third quarter. The state's debt to enterprises fulfilling the State Defense Order is constantly increasing. It will obviously not now be possible fully to pay off these debts, so in some areas the enterprises will complete the fulfillment of the 1993 order in 1994.

[Zadunayskiy] What stage has the arms program now reached and where do you think its most vulnerable points lie?

[Kokoshin] The arms program for the period up to the year 2000 has been submitted to the government by the Defense Ministry and is at the stage of coordination with other departments. The draft defense order for 1994 has been submitted by the Defense Ministry... Heated debates are taking place within the government concerning the volume at which the defense order should operate. We have had to rebuff several attempts to reduce the volume of the 1994 defense order to below the level of the 1993 order; back in August-September this year, Defense Ministry procurement authorities gave the enterprises general guidelines concerning the minimum level of order which we are prepared to agree to. But we cannot start concluding contracts with the enterprises, because the government has not yet approved the 1994 state order. The 1994 state order depends in turn on the adjusted budget for the fourth quarter of 1993, which

was discussed at a session of the government presidium on Friday 18 November. At the moment we are "living by" the 1993 defense order that was approved by the government in 1992.

At the present stage there is a pressing need to ensure, beginning in 1994, that there is clear monthly or quarterly financing of the state defense order and the Armed Forces' activity, taking into account the inflation rate, as is customary in all civilized states, with funds definitely being allocated to enterprises supplying the Armed Forces by way of advance payment in the December of the previous year; that is, this year.

This measure will make it possible to ensure stable work by industry carrying out the state defense order, and will make the nonpayments crisis less acute. Our calculations show that the state's real expenditure on defense needs will be less, as a result.

In this connection the inflation index must be defined by the government on the basis of estimates by a suitable interdepartmental commission; at present there are major discrepancies between the Ministry of the Economy and the Ministry of Finance in estimating average inflation indicators: The Defense Ministry's estimates are closer to those of the Ministry of the Economy.

According to the estimates of Defense Ministry experts and a number of independent experts, the inflationary properties of the state defense order in its present drastically curtailed form have been greatly exaggerated. According to the adjusted federal budget, expenditure on payment for arms, military equipment, and research and development totals some 4.5% in annual terms; some 35% of the sum paid to enterprises goes into the income section of local and federal budgets in the form of taxes, 10% is locked up in materials acquired earlier, and only 55-60% can play a part in inflationary processes—and that is just 2.2-2.5% of the federal budget.

It is also very important to ensure rigorous economic control of the passage of payments through the banking system. The Defense Ministry recommends that it be stipulated in an appropriate state act that the time limit for payments to go through must not exceed three working days; if the limit is passed, banks must pay compensation to the purchasers on the scale of, say, 1% for every 24 hours of delay.

[Zadunayskiy] The edict refers to proposals by many departments, including the Defense Ministry, "for the stable functioning of enterprises in the defense sphere in a market economy," which they are to submit to the Russian Federation Government...

[Kokoshin] On this question the main principle proposed by us in a special report on "Russia's National Industrial Policy" involves the development in the defense industry of powerful, effective entities capable of operating in the market economy. This means, as a minimum, the amalgamation of many manufacturing

plants and design bureaus and the formation in a single industrial system (company or corporation) of a certain critical mass, so to speak, of technology and production sharing. We already have viable companies of this kind, such as the "Polet" aerospace association (Omsk), and the Ilyushin design bureau is currently preparing to amalgamate with a manufacturing plant in Voronezh. The Yakovlev design bureau and a manufacturing plant in Saratov have set up the international joint-stock company "Vypel."

Unfortunately, many sectors have not yet gone beyond the stage of artificial separation of design bureaus and manufacturing plants; the production of a single type of output prevails, yet company stability requires three or four types of output which are technologically related but allow the possibility of variation depending on the market situation. In this respect the Defense Ministry does not occupy a narrow, departmental position. I am constantly repeating that in the interests of Russia's national security in the broadest sense, it is necessary to have at least several dozen large industrial companies under various forms of ownership, real "locomotives" of the Russian economy. These "locomotives" are also an attractive focus of investments in world practice.

Furthermore, the Defense Ministry has drawn up and submitted to the government and various interested organizations and departments a whole package of proposals aimed at stabilizing the situation at enterprises fulfilling the defense order, and also at finding flexible solutions to their problems in the conditions of the transition to a market economy.

Among them is a proposal on permitting the issuing to enterprises of advances on the defense order, for a given fiscal year, in the fourth quarter of the previous year. The Defense Ministry is putting to the country's leadership the question of permitting the issuing of advances of up to 50% of the annual total for particularly complex products. In the conditions of inflation, this makes the end product cheaper and therefore reduces inflation.

Measures proposed by the Defense Ministry jointly with the State Committee for the Defense Sectors of Industry and the Ministry of the Economy envisage the possibility of opening special subsidiary accounts for industrial enterprises fulfilling the state defense order, into which advances and current payments allocated in connection with the defense order will be paid, so that these funds are not automatically written off against the enterprises' general debts because of the failure to ensure timely financing of the defense order.

Recognizing the exceptional importance of stimulating the widening of industrial production and the utilization of capital equipment, the Defense Ministry indicated in its proposals the need to introduce at industrial enterprises a differential tax, the rate of which would be in inverse proportion to the coefficient of utilization of capital production equipment.

These are just some of the most important measures proposed by the Defense Ministry to stabilize the situation at enterprises fulfilling the state defense order. As I said before, the president's new edict creates an important basis for the realization of these measures through the adoption of a whole package of normative government acts stemming from the president's edict.

[Zadunayskiy] Will the introduction of this edict reduce social tension in the defense industry?

[Kokoshin] The edict makes it possible to establish for workers at enterprises fulfilling the state defense order an average wage of eight times the minimum monthly rate, or for workers in the nuclear industry up to nine times. A Russian Federation Government decision is needed here on increasing the funds allocated for the realization of the defense order, since wages account for one-fourth of the price of output. It is also necessary to adopt a decision regarding changes in taxation, since the tax on eight times the minimum wage will immediately "take away" half the additional salary. Point five of the president's edict provides for a procedure for resolving this question. Incidentally, a long time ago the Russian Federation Defense Ministry came out in favor of increasing the tax-exempt sum of expenditure on wages included in the prime cost of defense output from four times to eight times the minimum wage, with a simultaneous increase in the relevant item of the budget and an adjustment in the taxation procedure.

We realize that these proposals require a careful study, by Ministry of Finance experts among others. Furthermore the Defense Ministry has put forward a proposal which met with the support of Oleg Soskovets, first deputy chairman of the government, on the question of remuneration for highly qualified, scarce specialists at defense production units. It is important for them to receive a wage commensurate with the wages of specialists of a similar grade producing profitable "civil" output.

[Zadunayskiy] Will enterprises fulfilling the state defense order not artificially increase prices for their output?

[Kokoshin] The question of pricing is highly complex and involved. In conditions of high inflation, it takes particularly great efforts to resolve it. As a rule, enterprises fulfilling the state defense order do not exaggerate their prices. It is another matter that they sometimes count in additional overheads and sometimes increase the number of hours and the number of people whom the defense order "feeds." This is understandable in human terms, since many enterprises maintain kindergartens, schools, hospitals, and the housing stock out of the profit on the defense order. The entire social sphere in the defense industry, which was and still is its pride and joy, has placed a heavy burden on the defense order. According to our calculations, two-thirds of the funds allocated by the state to

realize the defense order go on social needs, including the prevention of mass unemployment.

DOCTRINAL ISSUES

Two-Stage Force Generation for Army

94UM0077A Moscow NEZAVISIMAYA GAZETA
in Russian 4 Nov 93 p 1

[Report by Vadim Solovyev under the rubric "Security": "Grachev on Russia's Military Doctrine: 'The Army Is to Be Built in Two Stages'"]

[Text] Russia's Minister of Defense Pavel Grachev has presented for the first time Russia's military doctrine, just approved by the Security Council. He particularly underscored the fact that this is the first such document in the history of the Soviet Union or the Russian Federation consisting of three interrelated parts: Political, military and military-technical. In Pavel Grachev's opinion the keystone of Russia's military school of thought is that "the Russian Federation does not regard any state as its enemy." Russia proclaims its rejection of the use of force in relations with any other state, unless the need arises to repel direct aggression. Nuclear weapons are regarded only as a means of deterring the unleashing of aggression against Russia. Russia commits itself not to employ them against states which do not possess them.

In accordance with the military doctrine, Russia's military have been given a fundamentally new political mission: To take part in peacekeeping operations under the auspices of the UN and other agencies of international security.

Inside Russia certain military formations may be enlisted to assist forces of the Ministry of Internal Affairs and the police. According to Pavel Grachev, these functions involve "the immediate localization of armed conflicts within the state." In light of this position the enlistment of troops in the events of 3-5 October in Moscow would appear to be totally justified. Troops may also be used in mopping-up operations following natural disasters inside Russia.

The military part of the doctrine indicates that "although the likelihood of a world war has not been totally eliminated, it has been significantly reduced." Local wars and armed conflicts constitute the main danger to world stability. Russia's Armed Forces will be prepared to conduct both defensive and offensive operations in any situation involving the outbreak and the conduct of war.

The doctrine calls for the establishment of mobile forces. It outlines two stages for the army's organizational development. The first covers the period extending to 1996, during which time all Russian forces are to be withdrawn from abroad. Groupings of forces are to be deployed inside Russia in accordance with their purpose

and their missions, and their numerical strength is to be reduced to the prescribed level.

After 1996 the Army is to convert to a combination manning system. The military-technical portion specifies how and by whom the Army is to be outfitted and matters pertaining to the defense industry, as well as the main areas of military-technical cooperation with foreign nations.

Nuclear Provisions of New Doctrine

94UM0077B Moscow *SEGODNYA* in Russian
No 74, Nov 1993 p 1

[Article by Pavel Felgengauer under the rubric "Defense": "Russia Is Converting to a Doctrine of Nuclear Deterrence and Reserves for Itself the Right to a First Strike"]

[Text] The Security Council of the RF [Russian Federation] has finally approved a military doctrine. Even after it was approved, it remained confidential ("not for publication"). Its basic provisions are gradually becoming known, however. Specifically, General Grachev, RF minister of defense, has fully stated "everything" the document has to say about nuclear weapons.

The first part, the document's political principles, states: "The goal of RF policy in the area of nuclear weapons is to eliminate the danger of nuclear war and the employment of nuclear weapons by deterring aggression against the RF and its allies. The RF will not employ its nuclear weapons against any state which is a participant in the Nuclear Weapons Nonproliferation Treaty and does not possess nuclear weapons. The only exception would be an armed attack by a state linked by agreement in alliance with a state which possesses nuclear weapons against the RF, its territory, its Armed Forces, other forces or its allies, or joint actions by a nonnuclear state and a nuclear state in the execution or support of an invasion or an armed attack on the RF, its territory, its Armed Forces, other forces or its allies."

Apparently the system of nuclear deterrence of possible aggression now applies not just to the nuclear powers but also to their allies—to other NATO members, let us say—as well as to all nations refusing to sign the Nonproliferation Treaty. Russia's nuclear "umbrella" now covers all the members of the Collective Security Treaty and secures their territory against any invasion by any state allied to any nuclear power. And the other Eastern European countries and former Soviet republics now have a real incentive to join the Treaty on Nonproliferation of Nuclear Weapons and at the same time an incentive not to join the NATO bloc.

And so, as the Western nuclear nations have done in the past, Russia has officially acknowledged its nuclear weapons as a means of preventing war. The NATO

nations and the USA actually never renounced the possibility of a first nuclear strike. And the previous Soviet orientation "not to be the first to employ nuclear weapons" was more a matter of propaganda and was in any case not taken seriously by enemies of the USSR during the Cold War. However, that same doctrinal position led to the establishment of an enormous capability in conventional forces and weapons for the possible conduct of a full-scale conventional war on all fronts at once: In both Europe and Asia. A nuclear capability was also created for inflicting a "retaliatory strike" which surpassed the total capability of the other nuclear powers.

There is no possibility that the new Russia can maintain a war machine of the Soviet model and scale. Russia's conventional Armed Forces will apparently be relatively weak up to the year 2000. The open conversion from nuclear retaliation to nuclear deterrence is therefore a forced but entirely rational and courageous move. Incidentally, Gen. Grachev totally rules out the possibility of unsanctioned employment of nuclear weapons. "One person, even the president, will not be able to use the nuclear weapons."

"The RF does not regard a single state as its enemy," but the new military doctrine is still not thoroughly defensive, even though it is aimed at securing peace. The Russian Army must be prepared to conduct both defensive and offensive operations "to repel aggression" against either Russia or its allies. Accordingly, Russian forces may be permanently deployed outside of Russia's actual territory. The new doctrine does not specify the future numerical strength of the Armed Forces, previously set at 1.5 million. The reduction of the Army will continue, but "within prudent limits."

In accordance with the military doctrine, troops of the RF MVD [Ministry of Internal Affairs] will be used "to prevent or halt internal conflicts and threats to the territorial integrity of the RF or to the interests of the society and citizens." "Individual formations of the Armed Forces may be enlisted to assist internal affairs agencies and internal troops of the MVD in localizing or blocking off areas of conflict, halting armed conflicts, separating the parties and protecting strategically important facilities."

Gen. Grachev also stated that "at the present time Russia is not considering the possibility of joining NATO," but is interacting with the alliance as a partner. "We are not in favor of enlarging the number of NATO nations, since this is a military-political alliance." He also affirmed his personal opinion as the minister of defense that the main factor holding up the withdrawal of Russian troops from the Baltic area are infringements of the rights of Russian-speaking citizens. If this problem is solved, "there will not be a single soldier there within 6 months."

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